



Does motivational disposition predict the efficacy of a goals-based self-help intervention for improving well-being?

Submitted by Gary Lyle, to the University of Exeter
as a thesis for the degree of Doctor of Clinical Psychology, May 2018

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SCHOOL OF PSYCHOLOGY
DOCTORATE IN CLINICAL PSYCHOLOGY

LITERATURE REVIEW

Are unmitigated agency and unmitigated communion associated with symptoms of depression?

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Abstract

Background: The terms agency and communion are thought to represent normal facets of human motivation and behaviour. Agency is broadly described as a focus on the self and striving to meet one's own goals. Communion is described as a focus on developing and nurturing relationships with others. Agency and communion are not generally associated with negative mental health outcomes. However, the more extreme versions, unmitigated agency and unmitigated communion, have been found to be tentatively linked to a number of negative mental health outcomes such as depression.

Objectives: To examine the association between unmitigated agency and unmitigated communion and depressive symptoms.

Method: A search of three databases was conducted: PsycInfo, MedLine, and Web of Science. Screening for the review was guided by the PRISMA guidelines for conducting systematic literature review and also the CASP checklist to rate the quality of the papers meeting criteria for review.

Results: Twelve papers were included in the review. All the studies included were correlational in design. Within the 12 papers found, 16 studies were reviewed. 13 studies explored the relationship between unmitigated communion and depression. Two studies explored the link between unmitigated agency and depression. One study explored the link between both unmitigated agency and depression and unmitigated communion and depression.

Conclusion: A general trend of an association between higher levels of unmitigated communion and depression was observed in a variety of settings and populations. Limited data about the associated between unmitigated agency and depression tentatively suggests that the association is weaker. All studies were correlational in

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design meaning that we can only comment on associations and not make inferences about causality.

Introduction

Depression is the most common mental health condition in the world, affecting over 300 million people, and is also considered to be the leading cause of disability (World Health Organisation [WHO], 2018). It can have a severely disruptive impact on the lives of individuals affecting their health, relationships, ability to work and in some severe cases can even lead to suicide. There are a number of factors that can contribute to the development of depression including a complex interaction of biological, social, and psychological factors (National Institute for Health and Clinical Excellence [NICE], 2009). Adverse life events such as bereavement and trauma are commonly associated with depression, which has also been found to affect more women than men (WHO, 2018). Karger (2014) reports that women are diagnosed with depression twice as often as men and that the condition follows a more chronic course for women. For men, the diagnosis tends to be associated with higher levels of substance misuse and suicide. Karger (2014) also suggests that socially mediated gender roles have an impact on risk factors for the development of symptoms. In order to treat depression effectively it is important to understand why it affects some people more than others. Research is now considering the impact that individual personality differences may have on the development of depression. The constructs of unmitigated agency and unmitigated communion are one such area of interest that researchers are exploring in relation to the development of depressive symptoms (Helgeson & Fritz, 1999).

Agency and Communion

The terms 'agency' and 'communion' were first developed by Bakan (1966) in his publication *The duality of human existence*. Bakan proposed that agency and

communion represented “two fundamental modalities in the existence of living forms” (p. 15) or in other words two fundamental characteristics of human motivation and behaviour. Bakan (1966) commented extensively on how he viewed the manifestation of these two human characteristics:

Agency manifests itself in isolation, alienation, and aloneness; communion in contact, openness, and union. Agency manifests itself in the urge to master; communion in noncontractual cooperation. Agency manifests itself in the repression of thought, feeling, and impulse; communion in the lack and removal of repression. (p. 15)

Much has been written about the idea of agency and communion since Bakan's work and communion and agency have been described as the difference between 'getting along or getting ahead' (Hogan, 1982). Agency is characterised as a focus on the self for the purposes of self-development, striving to meet one's goals, focusing on one's ambitions and being independent. Communion is characterised by the development and nurturance of relationships, thinking about the needs and welfare of others, existing as part of a something bigger than oneself, and being concerned with family, friends, community, and society (Helgeson & Fritz, 2000). A life combining elements of both is thought to be important for general well-being as suggested by self-determination theory (Ryan & Deci, 2000).

Bakan (1966) viewed agency as being largely associated with masculine characteristics and communion representing feminine gender traits. More recent research has continued to find that men tend to exhibit more agentic character traits than women, and women tend to exhibit more communal character traits than men (Helgeson & Fritz, 1999). Research in recent years suggest that measures of agency and communion traits are generally uncorrelated with one another (Helgeson & Fritz,

1999) and when measured, tend to be conceptualised as representations of how people behave in their day to day lives.

Unmitigated Agency and Unmitigated Communion

Agency and communion represent elements of normal human behaviour and have not been found to be related to depression, problematic relationship patterns, and negative health outcomes; however, more extreme versions of the two constructs have been shown to be problematic (Helgeson & Fritz, 1999). Whilst it is possible to have traits of high agency and low levels of communion (or vice versa) and not necessarily experience any problematic outcomes (Helgeson & Fritz, 1999), having extreme or exaggerated levels of one without the mitigating influence of at least a moderate level of the other may have less favourable outcomes. Bakan (1966) describes this exaggerated form of agency as unmitigated agency.

Unmitigated agency is characterised as an excessive focus on the self with complete disregard for others. It is characterised as being hostile, arrogant, selfish, narcissistic, and domineering, traits which have been observed in other problematic presentations such as 'the dark triad' (narcissism, psychopathy, Machiavellianism, Trapnell & Paulhus, 2012). Although Bakan does not explicitly mention the concept of unmitigated communion, this has been considered in subsequent literature (Helgeson & Fritz, 1999). Unmitigated communion is characterised as placing others' needs consistently above one's own and an over-involvement in the affairs of others which is experienced (by others) as intrusive and unwelcome. Elements of 'The Big Five,' for example 'agreeableness' (Goldberg, 1990) have also been found to be associated with unmitigated communion (Helgeson & Fritz, 1993). This over-involvement in other's lives has a detrimental impact on attending to the needs of the

self due to the focus on other's affairs, needs, and worries becoming the overwhelming focus of one's efforts. Unmitigated agency is more common in males than females and unmitigated communion is more common in females. The two constructs have also been found to be negatively correlated with one another (Helgeson & Fritz, 1999). Interestingly, whilst Diehl, Owen, and Youngblade (2004) reported findings supporting these gender differences, they also found that as people enter old age, they tend to report more communal characteristics across the sexes and that agentic characteristics tend to diminish in both men and women.

The Personal Attributes Questionnaire (PAQ, Spence, Helmreich, & Stapp, 1974) which was initially developed to measure gender differences, is the most commonly used method of measurement for agency, communion, and unmitigated agency. Helgeson (1993) modified elements of the PAQ to measure unmitigated communion. Helgeson's measure has also been widely adopted as the standard measure of unmitigated communion.

Consequences of unmitigated agency and unmitigated communion

Diehl, Owen and Youngblade (2004) and Helgeson (1994) reported links between the development of certain physical and mental health conditions and high levels of agency or communion related to gender role differences. For men, Helgeson (1994) reported higher levels of substance misuse problems and antisocial behaviour and for women higher instances of depression and neuroses.

Whilst these reported figures may be accurate when seen in the light of gender role differences, we cannot simply reach the conclusion that these problems can also be attributed by extension to higher levels of agency and/or communion. As such a more specific focus on the role of agency and communion on mental health

outcomes needs to be considered. Helgeson and Fritz (1999) argue that this distinction between 'normal' and problematic presentations related to mental health outcomes when considering the role of agency and communion is often muddled because many researchers have failed to disentangle agency and communion from unmitigated agency and unmitigated communion. Helgeson et al. (2015) argues that it is also time to move away from sex differences and to begin focusing more-so on gender traits such as unmitigated agency and communion which although highly correlated to gender are not exclusive to any gender (Helgeson & Fritz, 1999). For example, Bershad (2001) reports findings which suggest negative mental health outcomes are apparent for both men and women who are high in unmitigated communion. The potentially isolating and relationally difficult positions of unmitigated agency and unmitigated communion may be linked to negative mental health outcomes of those exhibiting these traits. For example, Helgeson and Fritz (1996) found that the relationship between unmitigated communion and distress was mediated by the effect of relationship stressors. However, for those high in unmitigated agency it was observed that perceived loss of self-efficacy is related to poorer mental health outcomes (Helgeson & Lepore, 2004).

Conceptually there are also some interesting parallels with Beck's model of depression (1976) which suggests two depressive types: sociotropic and autonomous, and Blatt's model (Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982) which suggests the anaclytic and introjective depression types. The sociotropic and anaclytic depression types broadly suggest a pathway to depressive symptoms (excessive focus on others and relational considerations) which share many commonalities with unmitigated communion. The autonomous and anaclytic depression types suggest that a more excessive focus on oneself, self-appraisal,

and individuality are risk factors for depression. Conceptually there is some overlap here with unmitigated agency. Extreme focus on one area of needs at the expense of another, may result in less fulfilment of crucial, global needs for relatedness and autonomy/competence as suggested by self-determination theory (Ryan & Deci, 2000).

Theories of personality disorder have features which overlap with unmitigated agency and communion. Common features of borderline personality disorder (BPD), which is most commonly seen in females (Ryle & Kerr, 2002), include intense relationships and fear of abandonment (American Psychological Association, 2013) (APA), similar to unmitigated communion. Common features of anti-social personality disorder (ASPD), seen most commonly in men (Alegria, Blanco, Skodol, Liu, Grant, & Hasin, 2013), include egocentricity and lack of empathy (APA, 2013) much like unmitigated agency. The development of personality disorder is typically predated by childhood experiences of trauma (Ryle & Kerr, 2002). Therefore it is also possible that the development of traits of unmitigated agency and communion could also be linked to aversive childhood experiences.

One possible reason for the gender split in relation to the prevalence of unmitigated agency and communion (and related psychological conditions) could be the impact of early socialisation to gender norms. When viewed together, BPD and ASPD, and unmitigated agency and communion, seem to have roots in gender roles that result in potentially socially isolating perspectives which may predispose individuals to further mental health difficulties following the experience of childhood trauma.

The societal norms discussed here are largely in keeping with Western culture. Eastern cultures have a more collectivist societal structure (Bagozzi, Wong,

& Yi, 1999). It is possible that in individualistic cultures, unmitigated agency could be viewed as less of a problem. However, in more collectivist cultures, unmitigated communion may be viewed more positively. A point of interest will be to observe the country of origin for the studies included in this review.

Given the overlap in many areas of these constructs, we might expect that unmitigated agency and unmitigated communion will also be associated with depressive symptoms. This review is therefore interested in examining the links between unmitigated agency and/or unmitigated communion and symptoms of poor mental health; specifically symptoms of depression.

Research Question

‘Are unmitigated agency and/or unmitigated communion associated with symptoms of depression?’

Method

Eligibility criteria

Whilst previous research has shown that unmitigated agency and unmitigated communion tend to be correlated with male and female gender roles, consideration was given to including search terms relating specifically to gender in the database search. However, given that unmitigated agency and unmitigated communion do not completely represent male and female gender roles, it was decided to search only for unmitigated agency and communion. Consideration was also given to including search terms relating to associated personality traits such as elements of Type A personality (Friedman & Booth-Kewley, 1987) and elements of the Big Five (Goldberg, 1990). However, whilst unmitigated agency and unmitigated communion

have been shown to be related to elements of these constructs, the commonalities do not fully account for all aspects of the unmitigated agency and communion definitions.

Using guidance from the 'Preferred Reporting Items for Systematic review and Meta-Analysis Protocols' checklist (The PRISMA Group, 2009), the 'Participants, Exposure, Comparator, Outcome and Study Design' (PECOS) criteria will be utilised for the purposes of screening articles gleaned from the search process.

Table 1

PECOS inclusion and exclusion criteria

	Inclusion criteria	Exclusion criteria
Partiipants	Human adults (aged 18 – 65 years)	
Exposure	Self-report or other report validated measures of Unmitigated Agency and / or Unmitigated Communion using scales.	Studies which look only at measures of gender roles or associated traits.
Comparator	Studies that examine continuous variation in unmitigated agency (UA) / unmitigated communion (UC); studies that compared people with UA/UC to appropriate healthy controls	
Outcome	Depression Symptom measurement (validated self-report or diagnostic judgements)	Well-being measures, general distress measures. Depression measures which are not validated.
Study Designs	Prospective, retrospective, longitudinal, cross-sectional.	Review papers and case reports which do not report new findings. Qualitative studies.

Information sources

Three electronic databases were searched in order to investigate this question: Web of Science (which includes Web of Science Core Collection, BIOSIS Citation Index, SciELO Citation index and MEDLINE), PsycINFO, and Medline. These databases were selected as they gave a good spread of general, psychological, and medical database searches. The final searches were complete between 26th – 28th January 2018. Records from the earliest possible date available were searched in each database.

Search strategy

In order to fully capture any variations of the terms agency, communion, agentic, and communal, truncated search terms were used. Truncated versions of depression and common synonyms were also used (dysthymia and dysphoria). Based over a three line 'multi-field' search strategy, the following search terms were used in PsycInfo and Medline searching 'abstracts' and 'titles':

agen* OR commun*

AND

unmitigat*

AND

depress* OR dysphor* OR dysthym*

In Web of Science the same search terms were used with a new field being added for each line of the 'Topic' search.

A search of 'grey literature' was not possible due to time limitations and restricted resources.

Study screening

After removal of duplicates from the results of the database searches, titles and abstracts were screened. Full texts of the remaining papers were then screened, with any reasons for the exclusions of papers noted at this stage.

Screening was informed by evaluating titles, abstracts and full texts using PECOS criteria. Table 1 is a summary of the inclusion and exclusion criteria. The PECOS criteria were used rather than PICOS as 'Exposure' (relating to unmitigated agency and unmitigated communion) rather than 'Intervention' is more appropriate for the review in this instance.

Once database searches were completed and exclusion criteria applied, a manual search of the reference sections of the chosen papers was conducted to identify any additional key papers that have not been returned by the electronic search. One additional paper was identified that was not found in the electronic search. A full text review of this paper found that this study did not use a specific measure of depression therefore it was excluded and no adjustments were considered necessary to the initial search strategy.

Data extraction

Results from database searched were exported, stored and managed on Microsoft Excel manually for the purposes of screening. Following full review of the articles, the results were then summarised and entered into a table with the following headings: study, design, sample characteristics, key measures, key findings, strengths, and weaknesses.

Quality assessment of articles

The Clinical Appraisal Skills Programme (CASP, 2018) checklist was applied to assess the quality of the articles under review. As the majority of the articles retrieved for full review were of a correlational design, this particular tool was selected as it is not contingent on experimental designs. Identified strengths and weaknesses of each article were then recorded in the summary table (Table 2). The checklist was not used to exclude any studies but to help the narrative synthesis in weighing up the findings.

An independent-rater was consulted to provide input into the reliability of the screening process. 20% of articles (nine articles) at the title/abstract screening stage were checked. A further six full-text articles were screened to ensure that those selected for full-text review met the PECOS criteria. The researcher and independent rater were in 100% agreement at both stages of the screening process.

A discussion of the strengths and weaknesses of three full texts using the CASP checklist was then undertaken with an independent rater. As the CASP checklist provides a framework for assessing the quality of research studies in a series of yes / no / can't tell questions, a full check-list was completed by the rater for the three selected full-text articles and compared to the researcher's findings. Following comparison of our findings we discussed the reasons for our views and came to 100% agreement regarding the quality of the three papers.

Results

Searches from all three databases returned a total of 66 articles (24 from PsycInfo, 6 from MedLine, and 36 from Web of Science). An additional paper was identified for inclusion following review of reference sections of articles. A screen for

duplicate results was then performed which resulted in 48 results being identified for the next screening stage.

Following the PECOS screening procedure of titles and abstracts, a total of 21 full texts were then left to screen at the next stage. Three of these full texts were not accessible at the time of review. Two of these papers were theses which the authors have not made available for dissemination online. The third article was from a journal which was not accessible to the researcher or library staff. The full texts of the remaining 18 articles were then screened for inclusion in the final review using the PECOS criteria. Five more articles were then excluded from the final review. One article was excluded because the study focused on adolescents. Two articles were screened because they did not report on specific relationships between unmitigated agency or unmitigated communion and depression symptoms. One article used an unvalidated measure of depression. The final article was excluded as it was a review of existing literature and did not add any new research findings resulting in a total of 13 articles included in the review. The search process is summarised in Figure 1. A summary of the full texts can be seen in Table 2

Figure 1

Database search results

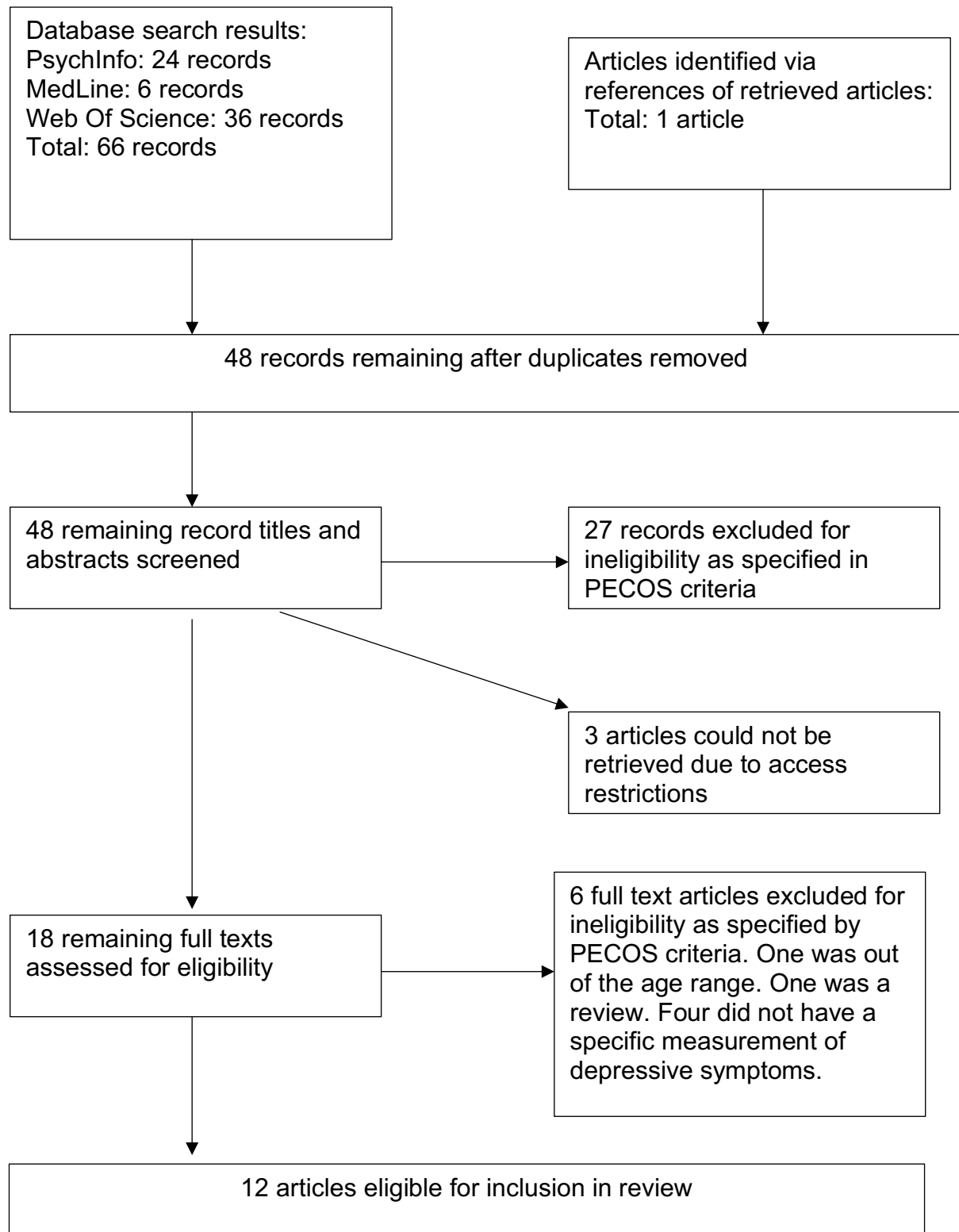


Table 2 *Summary of findings*

Study	Design	Sample characteristics plus country of study	Key Measures	Key Findings	Strengths (based on CASP guidelines)	Weaknesses (based on CASP guidelines)
Aube (2008) Study 1	Cross-sectional / correlational (comparing self-report and peer report measures)	102 total (73 female, 29 male) college students age range 18-43. USA.	Extended Personal Attributes Scale (UC sub-scale). The Community Epidemiological Survey for Depression.	UC was significantly associated with higher depression scores. This association also found in peer reports. (Self report: $\beta = .21$, $sr^2 = .05$; Peer report: $\beta = .27$, $sr^2 = .05$)	Clear questions developed to address short-coming of previous methodological problems. Novel method of using peer report to confirm findings. Appropriate method used. Good internal consistency for depression measure.	Males under-represented in study. Internal consistency low for UC measure ($\alpha = .51$). Use of college students may limit generalisability. Un-revised version of UC measure used which may be less valid and typically has lower level of internal consistency (reported as $\alpha = .51$)
Study 2	Longitudinal / correlational (2 data collection points over 10 years)	118 (total) archived longitudinal data sets collected at age 31 and 41. White middle and working class community sample in Boston. Gender ratio not reported. USA.	Ten items from Adjective Checklist which reflected UC (e.g. dependent, meek, obliging, self-denying etc). Zung Self Rating Depression Scale.	Age 31 UC positively associated with depression symptoms at age 41 after controlling for effects of age 31 psycho-social adjustment ($\beta = .34$) Main effect of age 31 communion and UC accounted for 11% of the variance in age 41 depression. UC-Depression relationship still significant after controlling for neuroticism.	Appropriate use of longitudinal design to challenge previous methodological issues. Other factors are controlled for such as age and psycho-social adjustment. Acceptable internal consistency for both measures. UC measure correlated with existing measures.	All participants from white, two parent families. More difficult to generalise. No age 31 measure of depression therefore cannot comment on direction of associations. Unconventional measurement of UC derived from archived data. Attempting to make archived data 'fit' for purpose. Self-report measures used which may be unreliable.

Study 3	Correlational using an 'event contingent' recording after every social interaction and a daily diary based method over 7 days.	78 (total, all female) undergraduate students. Average age 19. USA.	Revised Unmitigated Communion Scale. The Community Epidemiological Survey for Depression. Profile of Mood States.	Global measure of UC and two event-based measures of UC significantly correlated with daily depressed mood ($r = .23$; $r = .28$; $r = .59$). Higher levels of UC global significantly associated with higher levels of daily depressed mood ($\beta = .23$). After controlling for global UC, inter-action level UC predicted higher levels of daily depressed mood ($\beta = .47$). Main effect of global UC accounted for 5% of variance in daily depressed mood. Main effect of event-based measure accounted for additional 20% of variance in daily depressed mood.	Question designed to challenge previous methodological shortcomings. Novel approach to collecting 'current' data rather than retrospective reporting. Acceptable levels of internal consistency reported. Validity of self-report measures indicated by correlation between global and event-based measures.	Not always possible to record data immediately after every appropriate social interaction which may lead to bias. Interactions and diary use not monitored. Female only student sample makes it difficult to generalise.
Bershad (2001)	Cross-sectional / correlational	92 total (female = 57, male = 32) university students. Age range 25-68. USA.	Revised Unmitigated Communion Scale. Beck Depression Inventory.	UC significantly correlated with depression ($r = .40$).	Clear question informed by literature. Appropriate measures and procedure used. Reliability and validity of measures reported as being acceptable. Age range greater than a typical student sample making it more generalisable.	Student sample may not be representative of wider population. Self-report measures may have limited reliability. Correlational study therefore causation cannot be inferred.

Bruch (2002) Study 2	Cross-sectional / Correlational	189 (total, all female) undergraduate students, mean age 19.7. USA.	Extended Personal Attributes Questionnaire (UA sub- scale). Revised Unmitigated Communion Scale. Beck Depression Inventory.	Unmitigated Agency and Unmitigated Communion significant modes correlated with depression ($r = .15$; $r = .17$). No sig relationship between UC and depression when other predictors (sociotropy and autonomy) entered into regression model ($\beta = .14$). Relationship between UA and depression remained significant after other predictors entered into model ($\beta = .20$).	Appropriate method of investigation. Acceptable levels of internal consistency reported for all measures. Attempted to control for other constructs (sociotropy, autonomy).	Self-report measures may be unreliable. Female only student sample makes it difficult to generalise. Observational findings only. UC – depression findings unexpected – result not fully explored.
Fritz & Helgeson (1998) Study 2	Cross-sectional / Correlational	50 total (all female), university staff. Age 24- 78. USA.	Revised unmitigated communion scale. The Brief Symptom Inventory (depression sub-scale).	Unmitigated communion was significantly associated with depression ($r = .38$). Three 'interpersonal difficulties' mediated this relationship (difficulty asserting self, feeling uncomfortable receiving support, a desire to take advice from others) explaining 80% of the UC- Depression variance.	Ambitious paper comprising four studies. Study unpicks some of the characteristics of UC. Appropriate sample and methods employed. Sample from whole paper (four studies) is varied. Other studies not relevant due to age of sample and no measure of depression used. Reporting of acceptable test-retest reliability and internal consistency of measures.	Female-only sample restricts generalisability of findings although is in keeping with findings that UC is strongly associated with females. Only study 2 was appropriate for this review. Limited sample population for study 2 – all recruited from the same employer. Self- report measures may be unreliable as they may be subject to bias.

Helgeson & Fritz (1999) Study 2	Cross-sectional / correlational	211 total (112 male, 99 female) cardiac patients. Age 31-80. USA.	Revised Unmitigated Communion Scale. Brief Symptom Inventory (Depression sub-scale).	UA associated (not-significant) with higher depression scores ($\beta = .12$) and UC significantly associated with higher depression scores ($\beta = .27$) when controlling for sex.	Large sample with good male-female ratio. Appropriate method and measures used. Internal consistency of measures reported and acceptable. Controlled for sex differences.	Very specific sample with health complications which may impact depression scores. More difficult to generalise. Self-report measures may be less reliable. Correlational study therefore cannot infer causation.
Study 3	Cross-sectional / correlational	93 total (43 male, 45 female, the rest not specified) university students. Age range from 17-38. USA.	Revised Unmitigated Communion Scale. Brief Symptom Inventory (Depression sub-scale). Depressive Experiences Questionnaire.	UC significant positively associated with depression ($r = .23$). Unmitigated communion was significantly positively related to dependency ($r = .53$) and self-critical ($r = .24$) experiences which are conceptualised as sub-domains of depression. This differed from people with low agency who showed negative relations. Results suggest that the 'quality' of the depression is different for UC and low A people.	Appropriate method and measures employed. Internal consistency of measures reported at acceptable level.	Student sample using self-report measures may be less reliable and less generalisable. Causality cannot be inferred. Depressive Experiences Questionnaire is a measure of traits that are often correlated with depression, but not a specific measure of depression.

Jin, Van Yperan, Sanderman, & Hagedoorn (2010) Study 1	Cross-sectional / Correlational	Study 1: 87 total (all female), first year psychology students, age range 18-26. Netherlands.	Revised unmitigated communion scale. Centre for Epidemiological Studies depression scale	There was a small significant positive correlation between UC and depression (Study 1: $r = .23$). Supportive behaviour and depressive symptoms unrelated in people with high UC (study 1: $b = 2.75$) suggesting that depression levels in high UC is resistant to benefits of support giving.	Appropriate method of investigation used for exploration of associations. Adds new insight into existing body of evidence. Good internal consistency of measures.	Student sample may not be representative of wider population. Limited age ranges. Females only in this sample. Self-report measures only used which may be unreliable. Validity of measures not reported.
Study 2		263 total (female = 206, male = 57) students, age range 16-45. Netherlands.	Revised unmitigated communion scale. Centre for Epidemiological Studies depression scale	There was a small significant positive correlation between UC and depression ($r = .18$). Supportive behaviour and depressive symptoms unrelated in people with high UC ($b = 1.47$) again suggesting that depression levels in high UC is resistant to benefits of support giving. Furthermore Association not moderated by unsupportive behaviour ($b = 1.87$).	Found similar results to Study 1 and extended findings by examining potential moderating effect of enacted unsupportive behaviour.	Student sample includes both sexes but small male sample (22%). Student sample makes findings more difficult to generalise. Self-report measures only used which may be unreliable.

Josephson (2004)	Cross-sectional / correlational	510 (total) all male sample of gay men age 18+ (range not stated). Online only sample. Canada.	Revised unmitigated communion scale. Centre for Epidemiological Studies Depression Scale (short form)	UC correlated with depressive symptoms ($r = .27$). Unassured and submissive behaviour mediated relationship between UC and depressive symptoms.	Large sample size well above specified power calculation of $N = 90$. Reliability and validity of measures reported to be acceptable. Exploration of application of previous literature to specific cross section of population (gay men). Due to large sample, sample was split in two for the purposes of comparison to ensure reliability of scores.	No evidence for author's claim that agency is related to depressive symptoms in general population within review. Lesser known sources used to support ideas. Internet only sample difficult to monitor who is actually responding.
Nagurney (2007)	Cross-sectional / Correlational	97 total (34 males, 63 females) students. Age range 18-47. USA.	Revised unmitigated Communion Scale. Mental Health Inventory (depression subscale).	Very weak non-significant correlation between UC and depression ($r = .04$). Interaction of relationship stress and UC predicted depression scores.	Specific research question building on existing research. Appropriate methods and measures used. Looking more specifically at moderators of UC and depression relationship. Good internal consistency reported for both measures.	Student sample may not be representative of wider population therefore harder to generalise. Males under-represented. Self-report measures less reliable. Cannot infer causality. Proportion of variance and beta values not reported.

Brody et al. (2014)	Longitudinal / Correlational (depressive symptoms measured every six months for four years)	142 (total, all female). All African-American. 100 HIV+, 42 HIV-. USA.	Revised Unmitigated Communion Scale. Centre for Epidemiological Studies Depression Scale.	Unmitigated communion significantly correlated to depression scores recent and overall ($r = .23$; $r = .20$). HIV status / UC interaction did not predict recent or average depression scores over time ($\beta = .00$; $\beta = -.05$).	Clear and focused research question informed by previous research findings. Appropriate design, measures and sample for research question. Good internal consistency for depression measure	Some 'baseline' depression measures taken between 6-12 months before current study therefore not reflective of recent depression scores in some cases. Very specific sample makes it difficult to generalise results. Self-report measures may be less reliable. Internal consistency of UC measure not good ($\alpha = .49$).
Helgeson & Lepore (2004)	Longitudinal / Correlational (measures taken at 4 time points over 14 months).	93 total, all male. Recruited from cancer clinic sample participating in QOL intervention. Study sample is from control group of QOL study. Age 49-80. USA.	Abbreviated version of Extended Personal Attributes Questionnaire, Centre for Epidemiological Studies depression scale (modified).	UA significantly associated with depression symptoms ($r = .23$) over time. The relationship became non-significant when mediators controlled for (changes in self efficacy, changes in social resources, changes in negative health behaviours). Self-efficacy emerged as the only significant predictor of depression when all other factors entered into regression model ($\beta = -.36$). Over time UA was associated with a decrease in self efficacy ($r = -.29$).	Controlled for baseline measures. Specific question based on previous literature. Appropriate sample and method. Participants have comparable experiences in terms of cancer diagnosis / progression time frame. Low attrition rate.	Study may have been underpowered in a broader sense to detect mediation effects. Suggested that higher UA patients may not have participated. Self-report measures used may be less reliable. UA measures completed at final time point. Possibility that traits may change over time due to nature of illness. UA / depression scores before entering into treatment unknown. Mainly Caucasian sample with high level of education.

Fritz (2000)	Longitudinal / Correlational (two measures over 4 months)	65 total (45 male, 20 female) recent coronary event patients. Mean age for males 54.8, females 62 (range not reported). USA.	Revised Unmitigated Communion Scale. The Profile of Mood States (depression subscale).	Significant modest correlation between UC and depression ($r = .28$). UC significantly predicted depression scores at time 2 ($\beta = .24$) which was 4 months after first coronary event. Results similar when Covariates (age, sex and disease severity) were controlled for.	Clear research questions informed by previous literature. Appropriate design, measures and sample recruited to explore questions. Good internal consistency for measures. Covariates identified and controlled for. Depression scores at time 1 controlled for.	Unequal gender distribution makes it harder to generalise. Self-report measures may be less reliable. Sample size not adequate to detect interactions. Depression measures at T1 and T2 were not reporting similar time frame length. Very specific population. May be difficult to generalise.
Hoyt & Stanton (2011)	Longitudinal / Correlational (two measures over 6 months)	55 total, all male. Recruited from cancer outpatient clinic. All military veterans. Age 51-94. USA.	Extended Personal Attributes Questionnaire (UA scale), Abbreviated Centre for Epidemiological Studies depression scale.	UA and depression scores weak correlation at T1 and T2 ($r = .07$; $r = .18$). UA not associated with increased depression score across time ($\beta = -.05$) – 6 months between T1 and T2 for male cancer patients.	Appropriate design and sample for specific question. Measures reported to be reliable and valid. Internal consistency acceptable.	Military veteran sample may not be representative of male cancer patient general population. Sample were at different stages of diagnosis, treatment and cancer (type) diagnosis making it more difficult to compare. Limited time frame of 6 months. Self-report measures used which may not be reliable.

Summary and Critical Analysis

It is clear from the papers examined for this review that there has been a much greater interest in exploring the links between unmitigated communion and depressive symptoms than the link between unmitigated agency and depression. Of the 16 studies (spread across 12 papers), 13 explored the relationship between unmitigated communion and depression. Two studies explored the link between unmitigated agency and depression. One study explored the link of both unmitigated agency and communion, and depression. All studies were conducted in Western countries (13 in USA, one in Canada, two in the Netherlands). As suggested in the introduction section, there is a more strongly reported trend for females to report symptoms of depression compared to males. In parallel to this, the literature also suggests that unmitigated communion also tends to be more prevalent in females than males. This is one possible explanation for the research trend to be more focused on association between unmitigated communion and depression. With this in mind it will be much harder to reach any conclusions regarding the unmitigated agency and depression link compared to the unmitigated communion link. Another possibility is that the link between unmitigated agency and depression is more consistently null leading to fewer studies interested in it. It is also important to comment on the overwhelmingly correlational nature of the studies examined in this review (12 correlational studies and four longitudinal studies). Given that unmitigated agency and communion are considered to be personality traits (Bakan, 1966) it is difficult to conceptualise how this can be manipulated in an experiment. As such the research in the area tends to be more focused on looking for associations between these traits and other outcomes such as levels of depression, well-being, and physical health outcomes. Any methodological diversity tends to come from changes

in outcomes (such as using an 'in the moment' reporting system in place of retrospective measures) or using a longitudinal approach to test for any effect of time on the associations. Therefore any conclusions drawn in this review, even with high quality research, can only be a comment on associations rather than causal relationships.

Helgeson's revised unmitigated communion scale (1993) emerged as the main measurement in all studies which measured unmitigated communion with the exception of one study (Aube, 2008). It was developed as a specific measure of unmitigated communion due to questions about the reliability and validity of the unmitigated communion subscale of the Extended Personal Attributes Questionnaire (EPAQ, Helgeson, 1993; Spence, Helmreich, & Holahan, 1979). Helgeson's revised unmitigated communion scale has demonstrated good internal consistency ranging from .7 to .8 and high test-retest reliability (Fritz & Helgeson, 1998). All studies measuring unmitigated agency used the relevant subscale of the EPAQ which has been shown to demonstrate adequate reliability and validity and internal consistency ($\alpha = .85$).

An array of depression measures were used in the studies reviewed here. The most commonly used measure was the Centre for Epidemiological Survey for Depression (Radloff, 1977) with alphas as high as .90 being reported (Brody et al., 2014). The Beck Depression Inventory (Beck & Steer, 1987), Profile of Mood States (McNair, Lorr, & Droppleman, 1971) and the Brief Symptom Inventory (Derogatis & Spencer, 1982) were also used in a number of studies, all of which had acceptable levels of internal consistency reported. No study examined clinical diagnosis of depression and also no studies examined clinical populations.

Cross-sectional correlational studies (Unmitigated Communion)

A total of 11 studies in this review were cross-sectional. Ten of these examined the association between unmitigated communion and depression and one examined the association between unmitigated agency and depression (which will be discussed together with the other two studies looking at unmitigated agency). A variety of populations were examined in these studies. Seven of the studies exclusively studied university students, one looked at staff members at a university, one sample was from cardiac patients and another from a sample of gay men. As Helgeson (1994) suggests, although unmitigated communion is more prevalent in females, her findings suggest that the association between unmitigated communion and outcomes is similar across the sexes. Thus having mixed gender populations when examining unmitigated communion should not be problematic when interpreting the results and drawing conclusions based on observation of associations.

Regarding the cross-sectional studies that examined the unmitigated communion / depression relationship, six out of ten of these reported a significant positive association between unmitigated communion and depression with the general trend showing a modest but significant correlation around the .2 level (Aube, 2008; Bruch, 2002; Josephson, 2004). However, in one instance the co-efficient emerged as $r = .40$ (Bershad, 2001). Although this was a university student sample, which makes it harder to generalise to the wider population, the male ($N = 32$) to female ($N = 57$) ratio was much more balanced when compared to some other studies. An all-female, non-student sample ($N = 50$; Fritz & Helgeson, 1998) of university staff reported a similar effect size ($r = .38$). Both of these studies were considered to be of good quality. In contrast though, one paper found a very weak

association between unmitigated communion and depression. Nagurney (2007) found a very weak nonsignificant correlation between unmitigated communion and depression ($r = .04$) in a mixed gender university sample (which may not be representative of the wider population).

In a number of studies the researcher has attempted to unpick the unmitigated communion / depression association by covarying other variables. In some instances the inclusion of other variables (sociotropy, autonomy and submissive behaviour) into the regression model removed the significant association between unmitigated communion and depression (Bruch, 2002; Josephson, 2004). Fritz & Helgeson found that certain inter-personal difficulties accounted for much of the variance (80%) of the unmitigated communion / depression association. Conceptually it is important to acknowledge that unmitigated communion is quite a broad construct which has many overlaps with other theories of personality (e.g., elements of the Big Five). Whilst based on this evidence it is not possible to say that the link between unmitigated communion and depression is mainly due to any one specific element of unmitigated communion, future research may focus on unpicking the intricacies of the relationship.

A major issue with all of these studies is the use of self-report measures which are biased by the influence of social desirability. However, one study which attempted to deal with this concern (Aube, 2008) found similar results when comparing participant self-report scores with peer-reported scores. Whilst this was only one study it is at least some evidence to suggest that the self-report measures of unmitigated communion demonstrate good inter-rater reliability and therefore that the association with depressive symptoms is not explained by social desirability.

Overall though the general trend when looking at the cross-sectional / correlational studies seems to suggest that a significant positive association between unmitigated communion and depression does exist, although the magnitude of this association is moderate at best. In most studies depression was measured using retrospective self-report measures. This may be a limitation of these findings due to the problematic nature of relying on memory to report depression which can be influenced by one's mood at the time of rating. Using a more immediate measure of depression such as diary designs is one possible solution to this problem as it reduces the bias of later mood states on reporting.

Diary Designs (Unmitigated communion)

Two of the studies reviewed used a diary design in an attempt to address methodological shortcomings with pre-existing research examining the link between unmitigated communion and depression. The Aube (2008) study, which had an overarching theme of addressing previous methodological shortcomings, asked participants to keep a seven day diary to record 'interaction level' (momentary) unmitigated communion. This was compared to a more traditional global measure of unmitigated communion. Findings supported not only an association between unmitigated communion and depression at the global level but also at two momentary level measures. Higher levels of global unmitigated communion predicted high levels of daily depressed mood and when this was controlled for, daily interaction level unmitigated communion levels predicted higher levels of daily depressed mood also. This evidence suggests that states as well as traits are correlated which provides converging evidence for association.

In contrast though, Reynolds, Helgeson, and Seltman (2006) found no difference in the levels of depression reported in male and female college students

who were sorted into high and low unmitigated communion groups. They were asked to report levels of depression following instances of daily conflict at the end of each day (for seven days). Overall there was no significant difference in the depression scores between groups; however, when those scoring higher in unmitigated communion tended to report depression levels the day after a social conflict situation that were the same or being higher, whilst the low unmitigated communion group reported a trend of depression levels either staying the same or returning to a lower baseline. This suggests that experience of social conflict has a potentially more negative impact on the mood of individuals scoring higher in unmitigated communion. In light of the key literature, this finding is not too surprising given that individuals with higher levels of unmitigated communion place such great emphasis on their social interaction (Helgeson & Fritz, 1999). Instances of conflict would potentially be an indicator that the quality of some relationships are not as would be hoped. One difficulty with this study though is that sorting participants into high and low unmitigated communion groups could be an artificial and subjective way of grouping people on a trait which is measured on a continuous scale. This study was underpowered and it was suggested by the author that reporting on daily interactions may be protective for people high in unmitigated communion (by asking them to comment on their social contact) and could result in depressed mood scores being under-reported at the time of daily reporting. The daily depression measure was also a very brief report of how sad, depressed, and happy (reverse scored) they felt on a five-point Likert scale which may not have been as valid as more commonly used depression measures. The Aube (2008) diary study appears to give further weight to the building evidence of the association between unmitigated communion and depression.

Longitudinal Studies (Unmitigated Communion)

Relating to the unmitigated communion / depression association, three of the studies reviewed were longitudinal. The Aube (2008) paper used archival data (10 years) to examine the link between unmitigated communion and depression over time to counter the argument that the unmitigated communion / depression association is explained by other factors – in particular psycho-social adjustment and neuroticism. However when these were controlled for, unmitigated communion scores at the first time point predicted depression scores ten years later. This study used an unusual measure of unmitigated communion from archived data which used items from the Adjective Checklist to measure unmitigated communion. It showed a strong correlation with Helgeson's more traditional and more widely used measure of unmitigated communion ($r = .62$). The archived data did not include a measure of depression at time 1 so it was not possible to draw inferences about the relationship between unmitigated communion and change in depression over time. This is an important limitation to notes as depression may influence UC and directly predict future depression.

The Brody et al. (2014) study showed that unmitigated communion was associated with depression over a four year period when comparing most recent depression scores and four year average depression scores (measured every six months) in a sample of women at risk / with a diagnosis of HIV. Whilst this is a very specific population, the interaction of HIV status and unmitigated communion levels did not predict depression scores. This moderately sized but niche sample ($N = 142$) gives further evidence to the unmitigated communion / depression association. The results suggest that regardless of HIV status in this sample, the association between unmitigated communion and depression persisted over time. Mental health

interventions for members of this group who are high in unmitigated communion may more usefully be targeted at problems related to unmitigated communion rather than interventions linked to physical health. This provides further evidence of a more global association between unmitigated communion and depression.

Lastly, the Fritz (2000) longitudinal study (over four months) looked specifically at men ($N = 45$) and women ($N = 20$) who had experienced a recent coronary event. A particular strength of this study is the greater proportion of male participants which is more unusual in studies examining unmitigated communion. Fritz found a significant overall association between unmitigated communion and depression and also found that unmitigated communion significantly predicted depression scores at the second time point (four months later, controlling for depression scores at time 1) which may have implications for the treatment of people high in unmitigated communion who experienced a cardiac event. Unfortunately the study was reported to be under-powered. Keeping this in mind though, tentatively, whilst this is a quite a niche sample which is not representative of the general population, it is another example of the unmitigated communion / depression association with a more balanced gender sample.

Unmitigated Agency and Depression

As noted there were far fewer studies found that examined the association between unmitigated agency and depression. One was a cross-section correlational design and the other two were longitudinal. Bruch's study (2002) was somewhat unusual in that the sample of female ($N = 189$) university students examined unmitigated agency as well as unmitigated communion. This is particularly unusual in that unmitigated agency is much more prevalent in males (Helgeson & Fritz, 1999). It is also important to note that whilst Helgeson (1994) reported that the

mental health outcomes associated with unmitigated communion were the same for men and women, the same cannot necessarily be assumed for unmitigated agency. Nevertheless, Bruch found a significant positive correlation between levels of unmitigated agency and depression ($r = .15, p < .05$) which remained significant after other predictors (sociotropy and autonomy) and were added into the regression model ($\beta = .20, p < .01$). The recruitment of a female student sample when examining a traditionally male trait makes it difficult to generalise these findings.

In the first of the two longitudinal studies, Helgeson and Lepore (2004) found a modest significant positive correlation between unmitigated agency and depression measured across time in a sample of 93 male prostate cancer patients ($r = .23, p < .05$). The relationship became non-significant when mediators were controlled for (changes in self efficacy, changes in social resources, changes in negative health behaviours). However, they found a significant interaction such that for male prostate cancer patients who were high in unmitigated agency, decreased self-efficacy predicted higher levels of depression (controlling for depression scores at time one). As this study has a particularly specific sample (which by its very nature can only include men) which is also underpowered, it is difficult to make any comment about more generalisable results.

Hoyt and Stanton (2011) also recruited a sample of male cancer patients ($N = 55$) who were military veterans. They found non-significant, weak to modest correlations between unmitigated agency and depression scores at time one and time two (six months later, controlling for depression scores at time one). As with the Helgeson and Lepore (2004) study, it is difficult to apply these non-significant findings to the wider population due to the very specific sample. Male, military cancer patients may be considered to be a unique population with a very specific set of traits

and experiences which could impact their presentation and responses to a cancer diagnosis. As with other studies, the use of self-report measures also comes with methodological concerns in addition to the fact that the participants were diagnosed with various types of cancer at different points of diagnosis and treatment – making the results less meaningful even within the group.

In summary, the very limited number of studies looking at the link between unmitigated agency and depression makes it difficult to make any firm conclusions however from what has been reported in these studies, the link between unmitigated agency and depression seems weaker. The absence of a more generalisable population sample is also a serious methodological concern in terms of this review. The individual findings of each study are quite specific to the groups being examined and without a larger body of evidence to compare this with, it is impossible to come to any meaningful conclusions about the association between unmitigated agency and depression. It is possible that studies interested in exploring the association between unmitigated agency and mental health outcomes more typically associated with men (such as anti-social behaviour and problematic substance misuse) would return a greater number of results.

There are some notable parallels that can be observed here with other theories of depression, in particular Beck's cognitive-behavioural model of depression (1976) and Blatt cognitive-developmental model (Blatt et al., 1982). Beck's 'sociotropy' depression type, which predicts that over-dependence on others is a risk factor for depression and also Blatt et al.'s model of 'anacletic' depression, which is characterised by an excessive concern with interpersonal relationships as a risk factor for depressive symptoms have some similarities with the theory of unmitigated communion. The association between unmitigated communion and

depressive symptoms observed in this review conceptually sits along-side these depression models due to the similar excessive and damaging focus on 'the other' being associated with depressive symptoms in all three theories. The Beck model of depression also suggests that an 'autonomous' depression type exists which has similarities with the Blatt et al. 'introjective' depression type where an excessive focus on the self is considered to be a risk factor for depression. Whilst the pathways to depression between the autonomous and introjective models have some differences, there are also many similarities which overlap with the excessive focus on 'the self' which is theorised by Bakan's (1966) model of unmitigated agency. As such we may have expected to see more evidence for a relationship between unmitigated agency and depressive symptoms in this review. The limited number of results returned makes it difficult to make any firm conclusions about the association between unmitigated agency and depressive symptoms and how this sits within the wider literature.

Conclusion

This review set out to examine the associations between unmitigated agency and unmitigated communion with depression. Whilst causality cannot be inferred, the over-arching trend of higher levels of unmitigated communion being correlated with higher levels of depression was observed in this review with relatively modest effect sizes.

Unfortunately there was a dearth of studies exploring the association between unmitigated agency and depression. As such it was not possible to come to a firm conclusion about the association between unmitigated agency and depression although the presence of an association between the two seems less likely based on what was observed in this review. Investigating this area further would be an

interesting area for future research. Future research may also be interested in shedding more light on any moderating or mediating factors to determine if there are any specific elements within the domains of unmitigated agency or unmitigated communion that explain some the associations observed here. A lack of studies in clinical populations also makes it unclear to what extent this is a problem in clinical populations and how it may therefore be related to how depression is treated and how it may contribute to symptoms along-side other known factors.

There are some limitations relating to this review to highlight. Firstly the very specific focus on unmitigated agency and unmitigated communion potentially excluded some key papers that examined the association between depression and some of the similar theoretical constructs already mentioned in this review (such as gender roles and other theories of personality). Some of the studies reviewed here took a deeper look at related variables which may have mediated the associations with depression. By examining further literature relating to overlapping constructs we may have been able to observe a pattern in mediating variables. It is noted that a number of studies did not meet eligibility criteria because they focused on other related mental health issues such as psychological distress and well-being. A broadening of criteria in this respect may have returned more results particularly those looking more specifically at unmitigated agency. A search of grey literature would also be beneficial to examine findings which have not been published and may include a greater representation of non-significant findings.

It is also important to note that all studies reviewed here were conducted in Western countries. This is a potentially limiting factor as the findings reported here may only be applicable to Western psychological thinking where the concepts of unmitigated agency and communion may have a much different prevalence than in

Eastern countries which have a more collectivist culture (Bagozzi, Wong, & Yi, 1999). It is possible that there is a weaker association between unmitigated agency and depression in collectivist cultures. Future research could examine the prevalence of unmitigated agency and communion in Eastern countries and also the links with depression.

The observed association between unmitigated communion and depression is potentially useful information in terms of application in psychological and physical health related settings. The results of this study indicate that high levels of unmitigated communion may be a predisposing factor to the development of clinical symptoms of depression in the wider population. It highlights that excessive involvement in the affairs of others that negates the importance of meeting one's own needs is associated with higher levels of depression. Screening for unmitigated communion before treatment may give clinicians information about the possibility of emergent depressive symptoms for clients high in unmitigated communion. Therefore, in terms of clinical application when working with depressed clients we could potentially use measures of unmitigated communion to inform our understanding of their interpersonal relationship style. In terms of our understanding of depression it suggests that certain motivational patterns are associated with symptoms. This could then have implications for the type of treatment offered. For example a therapy such as Cognitive Analytic Therapy (CAT) which is a relationally orientated model, and also commonly used for the treatment of BPD (Ryle & Kerr, 2002), would perhaps have greater benefit for someone who scores highly in measures of unmitigated communion. This may also potentially indicate to the therapist that traits of an underlying personality disorder may be present which could be taken into account when planning any therapeutic work.

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EMPIRICAL PAPER

Does motivational disposition predict the efficacy of a goals-based self-help intervention for improving well-being?

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Abstract

Background: Self-help interventions can be useful in improving well-being and improving symptoms of low-level mental health problems. Goal-setting has also been found to be linked to well-being. In order to maximise the benefit of any goal related self-help interventions, it may be advantageous to consider for whom they may work best.

Objective. The study aimed to replicate and extend previous findings relating to the efficacy of the Goal Setting and Planning (GAP) self-help intervention for improving well-being using an active control group to allow for a more carefully controlled test of GAP. In addition to this, the study aimed to examine the potential mediating effect that the intervention has via goal progress. Lastly the study aimed to investigate whether the gains in well-being associated with the GAP intervention will be greatest for individuals scoring more highly in 'agentic' value scores.

Method. A controlled trial of 58 participants completed pre and post measures of well-being and were also led through a goal selection exercise in which they chose two goals to work towards over a five week period. Twenty-nine participants were allocated to the intervention condition which involved working through the GAP intervention in an online format to support their goal progress. The remaining 29 participants were allocated to the control group and were asked to work towards their goals without any further support. All participants were asked to provide goal attainment scores at the end of week three and at the end of week five.

Results. There was no significant effect of condition on post-intervention outcome measures ($p = .87$, partial $\eta^2 = .02$). Post measures indicated small but not significant gains in well-being across groups. Goal progress averaged across the two assessments did not differ significantly between groups. The conditions for mediation

were not met therefore it was not possible to test for the mediating effects of goal progress on well-being. Lastly, moderation analysis showed that agency value scores did not significantly moderate the effectiveness of GAP in improving scores on any of the well-being measures.

Conclusion: These null-findings particularly in relation to the efficacy of the GAP intervention were unexpected given significant findings in previous trials. However, the use of an active control group allowed for a more focused examination of the efficacy of the self-help components compared to previous trials. It is suggested that the goal-setting elements of GAP completed by both conditions may account for the small gains in well-being. Limitations of the current study are discussed particularly in relation to the use of a non-clinical, mainly undergraduate student sample. It is also suggested that goal-based self-help interventions may have limited use in non-clinical student populations. Ideas for future research are made including the recruitment of participants who would potentially benefit more from an intervention to improve well-being such as GAP.

Introduction

Mental health services within the National Health Service (NHS) are coming under ever increasing pressure to meet the demands of their growing numbers of clients in a time of austerity when resources are becoming increasingly restricted (Department of Health, 2016). New innovations and preventative strategies to preserve the well-being of the population are being considered as ways to reduce the development of more severe mental health conditions. The idea of providing support in the pursuit of personally valued goals and plans to achieve them is one such area which has shown promising results in improving the well-being of individuals (Coote & MacLeod, 2012).

Goals and Well-being

Goals can be defined as “internal representations of desired states” (Austin & Vancouver, 1996, p. 338). Therefore, goals represent something of value that is imagined to be of some benefit to the individual which may enhance their quality of life. Klinger (1977) suggests that having goals helps individuals to organise behaviour and provide purpose in life which is linked to life satisfaction and overall well-being (Diener, 1984). A meta-analysis of 85 studies based on 108 samples by Klug and Maier (2015) found a significant association between successful goal striving and subjective well-being. It is thought that to strengthen this relationship, having goals that are self-concordant—goals that are intrinsically rewarding or hold personal value—maximises the benefit of goal-attainment on well-being (Sheldon & Elliot, 1998). Thus, to maximise the potential improvements in one’s well-being, it is important that the goal is something that holds personal value and not simply something that one ‘feels they should be doing’ for some extrinsic purpose. This is further highlighted in findings by Pueschel, Schulte, and Michalak (2011) who, in a

study of 61 psychotherapy out-patients, found that 'motive congruent' personal goals—that matched implicit motivation and therefore reflected deeper values—were found to have more benefit in improving depressive symptoms than goals that did not. They argue that working towards a goal such as 'wanting to do better in one's professional life' would not necessarily relate to improved feelings of well-being if it was not something that represented an important value to that person at a deeper, nonconscious level. Locke and Latham (1990) also suggest that to maximise goal progress, goals and plans to achieve them need to be clearly defined. Thus, the research seems to suggest that people who pursue specific goals that align with their values are likely to experience greatest gains in well-being.

Goal Setting and Well-being in the Current Climate

Within the NHS, the Five Year Forward View for Mental Health (Department of Health, 2016) suggests that a 'proactive and preventative' strategy needs to be adopted to meet the ever-growing demand for mental health services. The type of support offered within primary care services for low level, common mental health problems includes psychoeducation and self-help interventions. It is also common practice for goal setting to be a part of the therapeutic process for these mental health interventions. Pueschel et al. (2011) suggest that when motive-congruent goals are developed between the therapist and client then this may have the benefit of enhancing outcomes. However, it is possible that the benefit of goal-setting on well-being does not have to be limited to one-to-one therapy.

The Faculty of Public Health (FPH) have identified the need to invest in initiatives to improve well-being as cost effective ways to decrease the need for people to access specialist services (FPH, 2018). As such, shifting the focus from 'response' to 'prevention' is an area of growing interest. Prevention by enhancing

well-being could be a simple and more cost-effective way to make changes 'upstream' from the crisis point.

Self-help

Self-help interventions can be described as structured treatment methods with which the patient can help themselves (Lucock, 2007). A number of well researched self-help interventions are now recommended by the NHS for common mental health problems such as mild-moderate depression (NICE, 2009). A review of 22 studies by Andrews, Cuijpers, Craske, McEvoy, and Titov (2010) found that online CBT based self-help treatments for anxiety, panic disorder, social phobia, and depression were found to be effective with positive outcomes that were maintained at 26 week follow up in some cases. Trials by Buntrock et al. (2016) and Topper, Emmelkamp, Watkins, and Ehling (2017) showed that internet-based self-help interventions with some guidance from a therapist were as effective as preventative interventions for sub-threshold symptoms of depression and anxiety. However, research has also highlighted the potential benefits of incorporating an external support (Bilich, Dean, Phipps, Barisic, & Gould 2008; Mains & Scogin, 2003; Mansell, 2002) into self-help interventions.

Goal-Setting and Planning

The Goal-setting and Planning (GAP) intervention was initially developed and tested by MacLeod, Coates, and Hetherington (2008) as an intervention drawing on previous studies investigating the importance of goal setting and planning as a means to improve general well-being. Self-determination theory (Ryan & Deci, 2000) suggests that autonomy or having freedom to choose one's own path or goals is a psychological need that when fulfilled can have a positive impact on well-being. Furthermore, research by Brunstein, Schulthesiss, and Grassmann (1998) and

Sheldon and Elliot (1998) found that working towards goals that are self-congruent / self-concordant (goals that hold personal value) is associated with positive outcomes on emotional well-being. For the purposes of this study, well-being is defined using the same definition as MacLeod (e.g., Coote & MacLeod, 2012), which is based on earlier research by Diener (1984): a state characterised by a combination of high positive affect, low negative affect, and high life satisfaction.

In its most recent form, GAP is a five-week self-help intervention which uses goal setting and planning to help people achieve goals as a way to improve well-being. It has been tested in a variety of settings and populations, and has demonstrated positive changes on the three elements of well-being (satisfaction with life, positive affect and negative affect). In a sample of non-symptomatic university students (MacLeod, Coates, & Hetherton, 2008), levels of life satisfaction were found to have significantly improved following completion of GAP compared to the control group, who only completed the pre and post measures. This version of GAP entailed participants attending three group sessions which were supplemented by a paper-based manual. Additional exercises were completed between sessions relating to the topics covered that week. The content of the sessions broadly related to selecting and refining goals, envisioning goals, planning, overcoming obstacles, and maintaining progress. In the same paper, a self-help manualised version of GAP was tested in a community sample of adults in London, which found significant gains in satisfaction with life, positive affect, and decreases in negative affect. In a forensic setting, Ferguson, Conway, Endersby, and MacLeod (2009) found gains in satisfaction with life and a decrease in negative affect after a six-week facilitated version of GAP comprising weekly group sessions. However, there was no control group in this study. The self-help manualised version of GAP was tested with a

group of depressed adults (Coote & MacLeod, 2012) using a cross-over design where the control group initially only completed baseline measures. However, following the GAP group's completion of the intervention, the control group then proceeded to complete GAP in the same format. Overall, Coote and MacLeod (2012) found significant gains in life satisfaction and positive affect in addition to a significant reduction in negative affect and depression scores. Most recently, a large sample of office based working adults employed by the civil service completed an online self-help version of GAP and showed significant increases in life satisfaction and positive affect (J. Oliver, personal communication, 28th February, 2017).

In each case the GAP intervention demonstrated efficacy in improving some or all elements of well-being (and depressive symptoms in one further sample). Whilst results have been promising, the findings have not always been consistent, possibly due to the different versions of GAP being tested at different times with different groups. When examined together it appears that completion of GAP is most commonly associated with significant gains in life satisfaction. However there appears to be a less obvious pattern to improvements in positive and negative affect between the studies. Whilst the most recent published study (Coote & MacLeod, 2012) uses a cross-over study design, the other studies either had no control group or a control group which only completed pre and post measures. The lack of active control conditions for comparison in previous studies means that it is unclear whether GAP is efficacious simply because it is 'something' rather than nothing. As such it is difficult to comment on whether the intervention was more efficacious for particular kinds of people. To date, there has also been no consideration given to any possible mediating factors which may have a bearing on the findings so far. An

area of interest in this study is to consider mediating or moderating factors including individual differences in how people will respond to a self-help approach.

Agency and Communion

It is possible that individual differences relating to motivational disposition will have an impact on the efficacy of goal-based self-help interventions, such as GAP. It has been argued that one of the most fundamental distinctions to make in terms of individual difference is in the areas of agency and communion (Helgeson & Fritz, 1999). The terms agency and communion were first coined by Bakan (1966) to describe two fundamental human motivational dispositions. People high in agentic motivation may be characterized as self-focused, being concerned with achievement, pursuing self-oriented goals, self-advancement, and being independent (Buchanan & Bardi, 2015). People high in communal motivation are motivated by establishing, maintaining and nurturing relationships (Helgeson & Fritz, 1999). Rather than independence, interpersonal connections may be sought-out as a priority. Communion characterises someone who is much more focused on 'the other.' Agency and communion have been characterised as the difference between 'getting along or getting ahead' (Hogan, 1982).

Trapnell and Paulhus (2012) make an argument for agency and communion existing as independent factors. They suggest that all combinations of agency and communion are possible and that concern in one area does not preclude concern in another. Helgeson and Fritz (1999), who have written extensively about agency and communion, found that measures of agency and communion are not correlated, in line with previous research by Spence et al. (1974). This suggests that agency and communion exist as separate constructs rather than being related on a continuum.

Although developed in the 1960s, the concepts of Agency and Communion have endured well into modern day psychological thinking and they continue to be regarded as representing a fundamental description of human motives, values, life-goals, traits, and behaviour (Trapnell & Paulhus, 2012). Considering the idea of agency and communion with the emerging evidence for self-help interventions raises interesting question about whether individual differences in these variables could be associated with the efficacy of self-help interventions. This is particularly pertinent in the current climate where improvements in well-being at early stages of symptomology may have the benefit of reducing demand for more specialist services. Thus exploring the idea for whom interventions such as GAP work best and how this may be moderated by individual differences is potentially an important way forward when considering how interventions may be delivered in the future.

Rationale for this study

The use of an active control group and measurements of goal progress will be used to explore the mechanisms of the GAP intervention. The control group will complete the goal selection steps of GAP which will allow for a more robust exploration of the relationships between completion of GAP and goal progress, and also the potential mediating effect of goal progress on gains in well-being. Research suggests that goal progress is associated with gains in well-being (Klug & Maier, 2015). More generally, this paper is interested in continuing to explore the evidence that goal-setting is an effective way to improve well-being.

This study is also concerned with exploring for whom GAP works best. Gellatly et al. (2007) report that when a 'guided' or communal element is added to a self-help intervention, in effect adding some further element of human contact (through further instruction, telephone contact, email or face to face contact), then

improved outcomes for the interventions were observed. MacDonald et al. (2007) report in their review that having contact with a practitioner to essentially explain the fundamentals of a self-help model was desirable. Furthermore, Khan, Bower, and Rogers (2007) found in their review of self-help experiences that “an awareness of the concept of *self* as the mechanism of change” at the early stages improved an individual’s understanding of the self-help material. In essence, this suggests that an awareness of the fundamentally agentic nature of self-help (being self-focused, driven and independent) improves one’s ability to engage in the process. Thus it could be argued that fundamentally, more agentic individuals could potentially derive more benefit from a self-help intervention due to their inherent drive for self-improvement and independence. Communally orientated individuals may still benefit however due to their more independent nature, it is predicted that participants scoring more highly in measures of agency will see greatest gains in well-being associated with completion of GAP.

Aims and hypotheses

A non-clinical sample will be used to test the efficacy of GAP using an online format and similar measures of well-being as in previous studies. Due to time constraints and the need to recruit the required number of participants to achieve sufficient statistical power for mediation analysis, it was not feasible to recruit from a clinical sample which would have been more difficult to recruit. This research however, will be extended by comparisons with an active control group who will complete the same goal-setting procedure as the intervention group but will not receive further support throughout the duration of the rest of the intervention (modules two to six, Appendix A). In order to make fair comparisons between the GAP group and the control group, particularly in relation to the goal progress

hypotheses, it was important that the control group had a similar goal setting experience to the GAP group. It is predicted that the additional modules of GAP which include guidance and exercises on planning, overcoming obstacles and maintaining motivation will benefit the GAP group in terms of increasing levels of goal attainment and as a consequence of this, improved levels of well-being. This procedure of having an active control group differs from previous studies where the control group initially had no exposure to any of the GAP content. To begin assessing the specific mechanisms of GAP, this study hypothesises that goal progress will be a mediator of benefits associated with GAP versus control. Moreover, this study examines whether the gains in well-being associated with the GAP intervention will be most effective for individuals scoring more highly in agentic value scores.

Hypotheses are:

1. Individuals in the GAP group will experience greater improvement in well-being (pre- to post-intervention) than those in the control group.
2. Individuals in the GAP group will report greater goal progress (pre- to post-intervention) than individuals in the control group based on combined goal attainment scores recorded at two time points (at the end of week three and the end of week five).
3. Goal progress, measured by combined goal attainment scores measured at two time points (the end of week three and the end of week five) will mediate the association between GAP completion (vs. control) and gains in well-being.
4. Individuals with a higher agentic value scores will experience greater benefit from the intervention than individuals with a lower agentic value score.

Communion scores are not expected to be associated with the efficacy of the intervention.

Method

Design

The study was a controlled trial design with two conditions: an online GAP intervention group who completed the full GAP and an active control group who completed pre and post outcome measures plus only the initial goal selection stage of GAP. The control group was asked to work on their goals without any further guidance. Alternate allocation was used to assign participants to groups.

Participants

The majority of participants were Psychology undergraduate students at the University of Exeter ($N = 40$). Undergraduate Psychology students were recruited via an online university research sign-up system. First year undergraduate psychology students received five course credits via the SONA system in return for participation in the study. In addition to this, there was also a prize draw for one of two £50 gift vouchers into which all participants who completed the study were entered.

A further 14 participants were other students and staff members at the University of Exeter who responded to posters (Appendix B) and recruitment emails distributed around the Washington Singer Building, Streatham Campus. The remaining four participants were members of the public who responded to an online advert for the study which was shared on social media. Twenty-nine participants were in the GAP group and 29 participants were in the control group.

Sixty-eight participants were initially recruited at the screening stage of the study. Participants were asked to complete an online version of the PHQ-8 which

was then reviewed before participation in the study was confirmed. This was to ensure that anyone scoring above 19 on the PHQ-8, which may be an indication of significant mental health concerns, were screened out and sign-posted to mental health services. Of the 68, three participants could not proceed further with the research due to not meeting criteria at the screening stage. A further seven participants completed the screen but chose not to proceed with the next stage of the study. In total, 58 participants completed the study: 38 females (66%) and 20 males (34%). Ages ranged from 19-48.

Power Analysis. In order for the study to be sufficiently powered, Fritz and MacKinnon's (2007) guide to sample size for mediation analysis was consulted. A sample size of 71 is suggested to have sufficient power to detect mediation using the bias-corrected bootstrap approach with an alpha level of .05 and a power level of .80. Previous research (Coote & MacLeod, 2012) suggests that we may have expected a medium effect size using Cohen's (1992) "medium" guideline. This minimum sample will be sufficient for all hypotheses which will require fewer participants. Using G*Power statistical software it was calculated that a sample size of 55 would be required to detect a medium effect size for the moderation analysis which was the next largest sample size required. A medium effect size if expected based on previous trials (Coote & MacLeod, 2012).

Measures

The Patient Health Questionnaire (PHQ-8; Kroenke, Strine, Spitzer, Williams, & Berry, 2009, Appendix C). The PHQ-8 is a brief, easily administered scale for measuring the severity of depressive symptoms. The PHQ-8 was used as an initial screen before participants proceeded on to the main research phase, as well as an

outcome measure. The PHQ-8 is an adapted version of the PHQ-9 (Kroenke, Spitzer, & Williams, 2001) which has the final question relating to self-harm / suicide removed. Kroenke et al. (2009) suggest that the same threshold levels can be used for both versions as the self-harm / suicide question has been found to have minimal impact on overall scores when it is included. Mean PHQ-9 scores for men and women in the general population are reported as 3.1 and 2.7 respectively (Kocalevent, Hinz, & Brahler, 2013). Mean scores for the PHQ-8 were unavailable. However as reported, the absence of the final question should make relatively little difference to PHQ-8 scores therefore we might expect mean scores for the PHQ-8 to be similar to the ones reported here for the PHQ-9. Cronbach's alpha for this sample: ($\alpha = .77$).

The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985, Appendix D). The SWLS measures the cognitive element of well-being. High scores on SWLS indicate greater well-being. It consists of five statements describing perceptions about various elements of the participant's life. Participants were asked to score the statements using a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The average life satisfaction score in developed nations is reported to be between 20-24. The SWLS has been shown to have good internal consistency ($\alpha = .87$) and test-retest reliability over a two-month period ($r = .82$; Diener et al., 1985). Cronbach's alpha for this sample: ($\alpha = .84$)

The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988, Appendix E) measures the affective or emotional aspect of well-being using two mood scales: positive (PA) and negative affect (NA). Higher levels of well-being are characterised by high scores in positive affect and low scores in negative affect. Ten items measure PA and 10 items measure NA. A series of

adjectives was presented representing positive or negative feelings and emotions. Participants were asked to indicate the extent to which they had 'felt this way over the past week' on a scale from 1 (*not at all*) to 5 (*extremely*). Population means for positive affect are 33.3 and 17.4 for negative affect. The scales have been shown to demonstrate good internal consistency (PA, $\alpha = .88$; NA, $\alpha = .87$) (Watson et al., 1998). Cronbach's alpha for this sample was high (PA, $\alpha = .87$; NA, $\alpha = .86$).

Agency and communion value measure (ACV; Trapnell & Paulhus, 2012, Appendix F). The ACV was developed for explicitly measuring agency and communion due to the lack of a well-established agency and communion measure within the literature. Participants were asked to rate the importance of a series of 'values' or 'guiding principles in their daily lives' using a 9-point scale ranging from *not important to me* to *highly important to me*. It has been shown to be both valid and reliable (agency: $\alpha = .83$, communion: $\alpha = .81$; Trapnell & Paulhus, 2012). This measure was completed at the initial face to face meeting. Cronbach's alpha for this sample was high (agency, $\alpha = .80$; communion, $\alpha = .81$).

Goal attainment scaling (GAS; Kiresuk & Sherman, 1968, Appendix G) was used as an objective measure of goal attainment for each goal. This involved participants being asked to define five qualitative standards that would characterise different levels of attainment, paired with a quantitative rating ranging from -2 (*very poor progress*) to +2 (*very good progress*) for each goal. This allowed for objective ratings of goal attainment to be made in subsequent weeks that were less contaminated by mood state. Participants were asked to define their goal attainment scales for each goal at the initial face to face meeting. Goal attainment ratings for

each goal were then provided at the end of week three of the process and the end of week five.

Demographics. Participants were asked to provide their gender, age and ethnicity on a customised record form (Appendix H).

GAP intervention. The Goal-setting and Planning intervention is a five-week intervention which was delivered in a tested online format (J Oliver, personal communication, 28th February, 2017). Example screenshots of the website can be seen in Appendix I and at: <https://goalsforwellbeing.wordpress.com>. The online format used in the current study was an adapted version of the paper-based GAP manual (Coote & MacLeod, 2012). The web-based version of the manual for this study was created and hosted on WordPress, a widely used web-hosting service. The intervention provides information about well-being, guidance on identifying goals and selecting two self-concordant goals. It also includes exercises using imagery to increase motivation and likelihood of goal success, support in making realistic and achievable action plans and tips to help identify and overcome obstacles to goal progress. An overview of the intervention timetable is reported in Table 1 with further details in Appendix A.

Those in the GAP group had access to the website throughout the five-week process. Module one, which related to goal selection, was completed by both groups at first contact with the researcher.

Table 1 *GAP (online) timetable*

Time	Intervention content
Week 1	Module 1: Choosing goals (completed during face-to-face contact) Module 2: Imagining achieving goals
Week 2	Module 3: Planning to achieve goals Trying out plans
Week 3	Module 4: Overcoming obstacles Trying out plans
Week 4	Module 5: Putting it all into practice Trying out plans
Week 5	Module 6: Review Trying out plans

Procedure

Ethical approval was granted on 12th October 2017 (Appendix L). Following this, potential participants interested in taking part in the study were recruited through advertisements on SONA or emails, posters (Appendix B) or online adverts on social media. The study was advertised as a five week goal setting intervention aimed at improving well-being. Those interested in taking part were asked to contact the researcher via email. Potential participants were then sent a link to complete the PHQ-8 screen. Suitable participants were then invited to face-to-face meetings with up to four other participants and were allocated alternately to either the GAP intervention group based on the order of first meeting. Face to face meetings consisted of either exclusively GAP group members or control group members.

At the meetings, all group members completed paper versions of the PHQ-8, PANAS, SWLS, and ACV measure and provided demographic information. All participants were also led through the very first stage of the GAP intervention relating

to goal setting (Appendix J) and the process of generating individual goal attainment scales (GAS) for their two goals (Appendix G).

GAP group. At the end of the group meeting, the GAP group were then given details about the intervention website and the weekly structure of the process. A brief demonstration was given on how to navigate the website using a laptop (examples of website pages can be seen in Appendix I). Attention was drawn to the weekly timetable and how to download the worksheets for each module (Appendix K). Immediately after the meeting, they received an email with a link to the website. As this was a self-help intervention, participants were informed that they were responsible for completing the modules and working towards their goals, however they received a brief, generic weekly email reminding them which stage of the process they were at and which module of the website corresponded to that particular week.

Control group. At the end of the group meeting, the control group were asked to begin working on their goals immediately without any further guidance for the next five weeks.

Goal progress monitoring and outcome measures

The researcher monitored timings for all participants (both conditions) and at the end of each participant's third week, they received an email asking them to rate their level of goal attainment 'over the last week.' Responses were sent via email. At the end of week five participants were asked to provide a second set of GAS scores and were also sent a link to complete measures again (PHQ-8, PANAS, SWLS) in an online format this time. A debrief document was sent to all participants at the end of the five weeks with full details of the study and also gave access to the GAP online intervention to the control group should they wish to avail of the content.

Results

Pre-analysis

Table 2 presents descriptive statistics for the study variables in the two groups. *t*-tests and chi-squared tests found no significant difference between groups in terms of sample characteristics (age and gender) and pre-intervention well-being scores. The groups were therefore considered to be similar at the pre-intervention stage.

Pearson correlations were calculated among all study measures at time 1 (baseline). Table 3 shows that, as expected, PA and SWLS were positively correlated with one another and correlated negatively with PHQ8 and NA. PHQ8 and NA were positively correlated. As expected from previous research, agency and communion were uncorrelated with each other. Agency and communion were uncorrelated with well-being and depression scores.

Table 2. *Descriptive statistics for sample and measures*

Measure	GAP		Control		t / χ^2	p
	M	SD	M	SD		
Gender	17 female, 12 male		21 female, 8 male		1.22	.27
Age	23.52	7.67	22.38	5.65	0.64	.52
PHQ8- baseline	5.17	4.38	4.76	2.68	0.43	.67
PHQ8 post intervention	4.28	3.79	3.93	2.07		
PA1	33.00	7.12	31.21	7.14	0.96	.34
PA2	33.62	6.24	32.00	6.92		
NA1	19.76	5.65	17.66	4.89	1.52	.14
NA2	19.96	7.21	18.69	5.38		
SWLS1	22.34	6.35	24.10	6.51	0.92	.36
SWLS2	24.10	6.51	24.55	5.99		
Agency	5.55	1.22	5.58	1.06	-0.11	.91
Communion	6.99	.95	7.16	.69	-0.78	.48

Note. PHQ8 = Patient Health Questionnaire; PA = positive affect; NA = negative affect; SWLS = satisfaction with life scale.

Table 3. *Pearson correlations among pre-intervention well-being and agency / communion scores.*

	PHQ8	PA	NA	SWLS	Agency	Communion
PHQ8	-	-.49**	.55**	-.48**	.11	.00
PA		-	-.39**	.39**	.10	.11
NA			-	-.42**	.15	-.16
SWLS				-	-.01	.18
Agency					-	.00
Communion						-

Note. PHQ8 = Patient Health Questionnaire; PA = positive affect; NA = negative affect; SWLS = satisfaction with life scale.

**correlation is significant at .01 level (two-tailed)

Hypothesis 1

A MANCOVA was conducted to test the prediction (Hypothesis 1) that those in the GAP group would experience greater gains in post-intervention well-being scores compared to those in the control group. The MANCOVA tested the efficacy of GAP using the pre-intervention scores as the covariate, post intervention scores as the dependent variable and 'condition' (GAP or control group) as the independent variable. Table 4 shows multivariate test results from the MANCOVA. There was not a significant effect of condition ($p = .87$, partial $\eta^2 = .02$) on the measures at the post intervention time point. No further analysis was performed due to the non-significant results of MANCOVA.

Table 4. *Multivariate test results for MANCOVA: Hypothesis 1*

Effect	<i>F</i>	<i>p</i>	partial η^2
PHQ8 (pre score)	7.04	<.001	.37
PA (pre score)	3.31	.02	.21
NA (pre score)	6.42	<.001	.34
SWLS (pre score)	7.68	<.001	.39
Condition	0.31	.87	.02

Note. PHQ8 = Patient Health Questionnaire; PA = positive affect; NA = negative affect; SWLS = satisfaction with life scale.

Hypothesis 2

A mixed ANOVA on goal progress with within-person factors of Time (week 3 vs. week 5) and Goal (goal 1 vs. goal 2), and a between-person factor of Group (GAP vs. control) was run to test the prediction in Hypothesis 2 that those in the GAP condition will report greater levels of goal attainment than those in the control group. Table 5 shows that condition did not have a significant effect on goal attainment when collapsing across the two time periods. The nonsignificant effect of Time also indicates that there was no significant overall difference (collapsing across goals and groups) in goal progress from the first to second measure. This model also took into account interactions between time, condition, and goal. No significant effect was observed in any of the interactions therefore none of the factors interacted to predict progress. The results indicate that hypothesis 2 is not supported.

Table 5. *Tests of between and within subjects effects for ANOVA: Hypothesis 2*

Effect	df	<i>F</i>	<i>p</i>
Condition	1	0.37	.55
Time	1	0.04	.83
Goal	1	3.07	.06
Time*Condition	1	1.59	.21
Time*Goal	1	0.14	.71
Condition*Goal	1	2.13	.15
Time*Condition*Goal	1	0.76	.38

Hypothesis 3

Hypothesis 3 predicted that goal progress would mediate the relationship between the effect of GAP intervention and gains in well-being. However, as reported in relation to Hypothesis 1, there was no effect of the GAP intervention on either well-being scores or goal progress which indicates that the steps for mediation to be a possibility were not fulfilled (Baron & Kenny, 1986). As such Hypothesis 3 was not supported.

Hypothesis 4

Hypothesis 4 predicted that participants with higher scores in the agency measure would experience greatest gains in well-being associated with the GAP intervention. Although there was no effect of condition on well-being scores, we proceeded with the moderation analysis because it could be possible that participants with higher agency scores could still achieve greater gains in well-being scores (due to GAP) than people with lower agency scores. Moderation analysis was

conducted using the SPSS PROCESS macro (Hayes, 2012) to test the moderating effect of agency and communion value scores on change in the well-being measures. Regression analysis was conducted on each of the post-measures, with predictors: pre-measure, (dummy-coded) condition, agency score, and communion score in step 1, followed by the addition of interactions between condition x agency and condition x communion in step 2 to test for moderation. Due to the testing of several outcomes, a more conservative alpha-level of .01 was used to determine statistical significance for all effects. Results in Tables 6 – 9 show that agency value scores did not have a significant moderating effect on the effectiveness of GAP in improving scores on any of the well-being measures. Results also show non-significant interactions between condition and agency value scores on post well-being scores, as expected. The results indicate that Hypothesis 4 was not supported.

Table 6. *Moderation analysis of Agency and Communion Scores with Condition on PHQ8*

Moderator	(Coeff) <i>B</i>	SE(<i>B</i>)	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>F</i>	<i>p</i>
PHQ8-1	0.58	0.08	6.89	.74			
Condition	-0.08	0.59	-0.14	.89			
Agency	-0.04	0.29	-0.13	.89			
Communion	-0.12	0.38	-0.33	.74			
Condition *	0.36	0.59	.61	.54			
Agency							
Condition*	1.21	.77	1.58	.12			
Communion							
Model					.50	8.56	> .001
Summary							

Table 7. *Moderation analysis of Agency and Communion Scores with Condition on Positive Affect*

Moderator	<i>B</i>	SE(<i>B</i>)	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>F</i>	<i>p</i>
PA-1	0.51	0.11	4.77	.73			
Group	-0.76	1.46	-0.52	.60			
Agency	0.97	0.73	1.34	.19			
Communion	0.19	0.94	0.21	.84			
Group * Agency	-1.77	1.46	-1.21	.23			
Group *	0.69	1.88	0.37	.71			
Communion							
Model Summary					.38	5.25	> .001

Table 8. *Moderation analysis of Agency and Communion Scores with Condition on SWLS*

Moderator	<i>B</i>	SE(<i>B</i>)	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>F</i>	<i>p</i>
SWLS-1	0.74	0.11	6.83	.96			
Group	-0.63	1.22	-0.52	.61			
Agency	0.31	0.60	0.52	.61			
Communion	0.15	0.80	0.18	.86			
Group *	-0.68	1.21	-0.56	.58			
Agency							
Group *	-0.25	1.58	-0.16	.88			
Communion							
Model					.50	8.59	> .001
Summary							

Table 9. *Moderation analysis of Agency and Communion Scores with Condition on NA*

Moderator	<i>B</i>	Se(<i>B</i>)	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>F</i>	<i>P</i>
NA-1	0.65	0.14	4.83	.92			
Group	0.68	1.38	0.49	.62			
Agency	-0.33	0.68	-0.48	.63			
Communion	-1.77	0.87	-2.02	.05			
Group *	1.12	1.36	0.83	.41			
Agency							
Group *	0.67	1.73	0.38	.70			
Communion							
Model					.42	6.07	> .001
Summary							

Discussion

This study set out initially to replicate and build on previous findings relating to the efficacy of the GAP intervention by testing whether the GAP group did better than a more active control group in which people selected self-concordant goals and monitored them without the additional content (Hypothesis 1). This study also set out to also consider in more detail a specific mechanism of GAP which had not previously been examined, namely goal progress as a mediator of the effect of the intervention on well-being outcomes (Hypotheses 2 and 3). In addition to this, the study also considered the idea that self-help goal-focused interventions may be better suited to some individuals than others. We hypothesised that higher levels in agentic motivation (measured by the agency-communion value scale) would predict

greater outcomes in well-being for the GAP intervention. However, no support emerged for these hypotheses.

Previous research into the efficacy of GAP found various examples of significant improvements in well-being associated with completion of GAP. As such, this study expected to find similar results in terms of the general efficacy of GAP being demonstrated whilst being delivered in an online format. Despite using similar measures as previous studies, this study did not find any significant benefit of completing the full GAP intervention compared to those in the control group. The overall effect of 'condition' on outcome was not significant with a small effect size in comparison to previous GAP studies, which report a non-significant trend of medium effect sizes (Coote & MacLeod, 2012). The other GAP studies examined did not report effect sizes for comparison with the present study.

Previous studies which used a control group for the purposes of comparison used a 'wait-list' control group.' A strength of the current study was the use of an active control group which actively engaged in the goal-setting element of GAP. This allowed for more robust comparisons between groups and a tighter test of the efficacy of the GAP exercises themselves. It is possible that being exposed to the goal-setting element of GAP may have had an impact on the subsequent behaviour of control group members meaning that they were more invested with the goal attainment behaviour than would have otherwise been apparent. It is possible that there was an implicit expectation in both groups that there would be an improvement in well-being which may have influenced reporting.

Looking at the change in mean scores from pre to post measures in Table 1 we can see that whilst small (around .5 to 1 point change), and with the exception of NA, all other measures showed small levels of improvement from pre to post

measure for both groups. It is possible that these small gains in well-being for both groups could be due to exposure to the goal-setting and progress monitoring procedure. This idea is supported by research by Locke and Latham (1990) who argue that goal success is more likely when an individual clearly defines their goal as opposed to having a vague goal and a 'do your best' mind-set. Exposure to the goal-setting element of GAP gave both groups a clear definition of what their goals were and how progress would be measured. It also ensured that the goals they chose were self-concordant, which was shown by Pueschel et al. (2011) to have greatest associations with well-being. Trends in previous studies (MacLeod, Coats & Heatherton, 2008; Coote & MacLeod, 2012) show comparable levels of change in the wait-list control groups as observed in both groups in the current study. It could be that in this instance, there was no clear benefit of completing any parts of GAP, as we may have expected similar levels of change without any exposure to GAP.

When comparing the pre scores of all measures to the reported population means described earlier, the means of the current sample in all well-being measures are similar to general population means which suggests that there was little in terms of obvious gains which could be made by completing GAP for the current sample. The samples in Ferguson, Conway, Endersby, and MacLeod's (2009) and Coote and MacLeod's (2012) studies appear to show much lower scores in life satisfaction and higher scores in negative affect than the normative population scores, which suggests that there was greater potential benefit to be gained in terms of well-being scores from completing GAP in these previous studies.

Hypothesis 2 and 3 focused more specifically on the goal-setting element of GAP and predicted that greater levels of goal attainment would be reported by members of the GAP condition and also that goal attainment would mediate the

gains in well-being associated with GAP. Firstly, in relation to Hypothesis 2 (relating to levels of goal attainment), in this instance there was no additional benefit for those in the GAP compared to control in terms of goal attainment. As suggested by Locke and Latham's 'goal setting theory' (1990), having exposure to the goal setting element of GAP gave the control group the same advantage of having clearly defined, self-concordant goals. It is possible that adding this element to the control group meant that subsequent goal attainment was of a similar level to the GAP group. The later stages of GAP which include guidance on planning and overcoming obstacles appears to have had no significant impact on levels of goal attainment. It could be that the gains from the goal selection process represented the greatest benefit in terms of goal attainment for both groups and the additional GAP content did not lead to any additional gains for the GAP group. It could also be the case that in a sample of mainly high-functioning university students, goal setting and planning skills are already quite well developed due to the demands of the education system as they progressed through various assessment processes and met various standards to arrive at the point of university-level education. Therefore the additional elements of GAP may have had limited additional benefit in terms of increasing goal progress for this sample.

In addition, the goals chosen were self-concordant, which participants may have been more intrinsically motivated to work towards (Pueschel et al., 2011) such that the GAP skills had marginal benefits. Therefore, it could be that the benefit of having self-concordant goals may have been more important than the potential additional benefits of completing the full GAP intervention in terms of goal attainment. The type of goal chosen was less emphasised than the self-concordance or importance of the goal in this study. The face to face goal setting process

encouraged participants to choose goals that were realistic and achievable for the intervention. Therefore the possibility that some participants chose much more difficult goals was reduced. Although not empirically checked, which is a limitation, all participants should have had goals which were comparable in terms of achievability and importance to the individual.

As outlined in the Results section, Hypothesis 3 (which predicted that goal progress would mediate the effect of GAP on well-being) was not supported because there was no effect of GAP on well-being or progress. It remains unclear whether goal progress would have mediated the effects on well-being associated with GAP which were observed in other studies.

Hypothesis 4 predicted that participants scoring higher on the measure of agency (but not communion) would experience greatest gains in well-being associated with GAP. Research suggests increasing levels of guidance from an external source improves the effect of self-help interventions (Bilich, Dean, Phipps, Barisic, & Gould, 2008; Mains & Scogin, 2003). As such, those with higher agency scores, who are intrinsically more independent and driven to attain personal goals (Bakan, 1966, Fritz & Helgeson, 1999), were expected to gain most from a self-help intervention such as GAP. Unfortunately, agency was found to have a non-significant moderator of the effect of condition on well-being.

We expected no specific relation between communion value scores and the efficacy of the intervention. Results of moderation analysis confirmed that there was no effect of communion on the condition / well-being relationship. Previous research suggests (Fritz & Helgeson, 1999; Trapnell & Paulhus, 2012) that agency and communion are two uncorrelated, independent constructs. Their uncorrelated relationship suggests that any variation of agency and communion scores could

exist. Agency and communion were not associated with change in well-being across the conditions when collapsed together. Therefore it does not seem that there is a confound such that certain types of people are more likely to report benefitting from a goal based intervention.

It is noted that the mean agency scores for the GAP and control group ($M = 5.55$, $SD = 5.58$) were lower than communion scores ($M = 6.99$, $SD = 7.16$). Higher scores on measures of agency also tend to be more commonly associated with males and higher scores on measures of communion tend to be more commonly associated with females (Fritz & Helgeson, 1999). As the sample had twice the number of females than males, this may account for a potential under-representation of higher agency scores in the sample. As such it may have been more difficult to detect the moderating effect of agency on outcomes in a sample that is possibly less variable in agency. Unfortunately normative data for the ACV measure were not available to make any firmer conclusions about the levels of agency and communion variability in this sample. It is possible that the null finding indicates that agency is simply not related to the efficacy of GAP. More research is needed to examine this finding more broadly to conclude whether levels of agency could predict the efficacy of goals-based self-help interventions.

Whilst it was disappointing that none of the hypotheses of this study were supported there are a number of factors that may have contributed to this. Firstly, in terms of sample characteristics, recruiting a sample of largely first year psychology undergraduates in the relatively middle-class area of the South West of England may have resulted in the sample having baseline well-being scores that were already at relatively acceptable levels. The Office of National Statistics (ONS, 2017) reports that levels of life satisfaction for Devon are slightly above the UK average. The ONS

suggests that employment, access to health services and financial security may be factors that have an impact on well-being. It is possible that in more rural, less population dense, middle class areas of the country, such as Devon, access to these things may be more likely. This could have a positive impact on the general well-being of the population in the area and by extension the student sub-population. There may simply have been less possibility for significant gains in well-being for the sample in this study. Previous studies have investigated samples in clinical populations who may have had the potential to experience greater gains in well-being associated with GAP due to their baselines being lower. Whilst there was an initial screening process using the PHQ8 to remove any participants above the cut-off, future research may consider targeting a more vulnerable population who may have more to gain from the intervention.

Recruiting a sample that may have been incentivised by gaining course credits as opposed to an interest in improving well-being may have been a contributing factor in the lack of significant results. Focusing on earning credits in return for working independently on a five-week intervention could potentially have resulted in some participants in either condition not fully engaging in the process which was difficult to check. A limitation of this study is that engagement with the intervention was not monitored throughout. The decision was made in the early stages of planning this research that in order to maintain the self-help element of GAP, minimal contact should be made by the researcher to participants after the initial face to face contact. Whilst members of the GAP condition received short generic emails reminding them of the GAP procedure, any additional interaction would have been considered to be infringing on the self-help element and potentially

making any conclusions relating to analysis of the effect of agency scores (Hypothesis 4) less confident.

In retrospect, the study was also under-powered to sufficiently detect any association between agency and the efficacy of the GAP intervention on well-being. Previous research (Coote & MacLeod, 2012) suggested that we might expect to see a medium effect size for the GAP main effect and as such a power analysis was calculated with this in mind ($N = 55$ for medium effect size for moderation analysis). However, a very small effect size was observed for the effect of the intervention in the present study and as such a much larger sample would have been required to detect any significant interactions. The comparison in this study was also more subtle than previous studies, due to the active control group. Therefore the effect size was likely to be smaller. Perhaps it was overly ambitious to expect a medium effect size particularly given that the effect size was not reported in other studies. The use of alternate allocation to experimental condition as opposed to randomisation is noted as a limitation of this study. Alternate allocation was chosen as within the meetings it was necessary to have homogenous groups – therefore it was not possible to randomly allocate participants to condition within the meetings. It was felt that this would have a similar effect to randomising however in hindsight it is clear that the logic of this decision is questionable because without randomisation, possible selection bias may have occurred. Analysis shows that there were no significant differences between groups at the pre-intervention stage which may obviate some of these concerns however other variable that were not measured may still have been unbalanced across conditions.

Although this study has found no evidence for the efficacy of goals based, self-help interventions for improving the well-being of a mainly student population,

there may still be value in continuing to explore the usefulness of this type of intervention for clinical populations with less severe symptoms from a public health perspective. The Faculty of Public Health (2018) have highlighted the need to invest in more cost effective interventions aimed at improving well-being which could be useful for clients at time points when mental health difficulties are first emerging. Previous research has demonstrated that GAP is effective in improving the well-being of some clinical populations (e.g., Coote & Macleod, 2012), although the specific mechanism of improvement is still unclear. NICE guidelines for depression (2009) suggest CBT based self-help interventions and 'behavioural activation' as potential treatments for low level depression. However, the lack of significant findings in this study has not added any evidence in favour of using a sophisticated, multi-layered intervention such as GAP to help improve well-being. It could be argued that previous GAP studies have demonstrated that simply 'doing something' has a positive impact and therefore more simplistic behavioural activation techniques could possibly achieve the same results. We have been unable to demonstrate the added benefits of GAP in this study. The previous research has shown that completing GAP appears to have benefits for clinical populations using a format which would be in line with, for example, NICE guidelines for depression (2009). Future research using a clinical population using active control groups like the current study could demonstrate why GAP may be of greater benefit than simple behaviour activation techniques which may have a more short-term focus of engaging in more activities compared to GAP which has more long-term aims relating to meaningful goals.

There were some strengths to consider in terms of this study. The use of an active control group served to isolate key aspects of the GAP intervention which allowed for more robust comparisons to be made. A wide array of outcome

measures were used which replicated those used in previous studies to allow for fair comparison. At the analysis stage, MANCOVA had the additional benefit of controlling for type I error rate with multiple dependent variables. This study also sought to advance previous research by looking at mediators and moderators which have not previously been considered in relation to the effect of GAP. Furthermore, there was a low attrition rate and everyone who met the researcher, completed the study. The online version of GAP also proved to be a very efficient way to deliver the content. Future research may consider exploring participant feedback and incorporating these into the online materials. One final recommendation for future research interested in considering for whom self-help interventions work best would be to recruit a larger, more diverse sample where a more balanced spread of motivational dispositions may be found. Given that the value of self-help has been established more widely, there is still value in future research in investigating for whom they work best particularly in clinical populations who may stand to gain most benefit from them in order to maximise the benefit for those who need them most.

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Appendix A: GAP (online) module content

Module 1: Choosing goals

What is well-being?

What factors are linked to high psychological well-being? : goals and plans.

Thinking of goals, selecting and refining goals

Module2: Imagining achieving goals

Envisaging goals

Explaining the rationale for the envisaging goals exercise

Envisaging goals work sheet

Module 3: Planning to achieve goals

Explaining the need for planning

Developing plans of action for goals

Action steps worksheet

Module 4: Overcoming obstacles

'The path is the goal' guidance

Discussing obstacles to goal progress

Identifying obstacles worksheet

Overcoming obstacles worksheet

Thinking about pros and cons of plans

Pros and cons worksheet

Module 5: Putting it all into practice

Take action now by putting it all into practice

Making modifications

Module 6: Review

Review of content themes

Maintaining progress

Appendix B: Study advert, poster form.



Participants needed!

Are you interested in improving your feeling of well-being?

I am currently running a study at the University of Exeter, Streatham Campus which uses goal setting and planning as a means of improving well-being. Research has shown us that people with high levels of well-being often have clear personal goals and plans for achieving them.

I am currently looking for participants, male or female aged 18-65 who would be interested in meeting to discuss setting two personal goals and working towards these over a 5 week period with the aim of improving well-being. There will be a number of questionnaires to complete at the beginning and end. In addition to improving well-being, there is also a chance to win one of 2x £50 Amazon vouchers for all participants. **5 course credits for 1st year Psychology undergrads!**

Contact Gary for more info on how to sign up: gl308@exeter.ac.uk



Gary Lyle – email:
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Appendix C: PHQ 8

Personal Health Questionnaire Depression Scale (PHQ-8)

Over the last 2 weeks, how often have you been bothered by any of the following problems? Please rate each statement using the following scale:

0. Not at all
 1. Several Days
 2. More than half the days
 3. Nearly every day
-
1. Little interest or pleasure in doing things _____
 2. Feeling down, depressed, or hopeless _____
 3. Trouble falling or staying asleep, or sleeping too much _____
 4. Feeling tired or having little energy _____
 5. Poor appetite or overeating _____
 6. Feeling bad about yourself, or that you are a failure, or have let yourself or your family down _____
 7. Trouble concentrating on things, such as reading the newspaper or watching television _____
 8. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual _____

Appendix D: The Satisfaction With Life Scale (SWLS)

The Satisfaction With Life Scale (SWLS)

Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- 7 - Strongly agree
- 6 - Agree
- 5 - Slightly agree
- 4 - Neither agree nor disagree
- 3 - Slightly disagree
- 2 - Disagree
- 1 - Strongly disagree

_____ In most ways my life is close to my ideal.

_____ The conditions of my life are excellent.

_____ I am satisfied with my life.

_____ So far I have gotten the important things I want in life.

_____ If I could live my life over, I would change almost nothing.

Appendix E: Positive and Negative Affect Scale (PANAS)

PANAS Questionnaire

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. Indicate to what extent you feel this way over the past week.

- 1. Not at all 2. Very slightly 3. A Little / Moderately 4. Quite a bit 5. Extremely**

- | | |
|----------------------|---------------------|
| 1. Interested ____ | 11. Irritable ____ |
| 2. Distressed ____ | 12. Alert ____ |
| 3. Excited ____ | 13. Ashamed ____ |
| 4. Upset ____ | 14. Inspired ____ |
| 5. Strong ____ | 15. Nervous ____ |
| 6. Guilty ____ | 16. Determined ____ |
| 7. Scared ____ | 17. Attentive ____ |
| 8. Hostile ____ | 18. Jittery ____ |
| 9. Enthusiastic ____ | 19. Active ____ |
| 10. Proud ____ | 20. Afraid ____ |

Appendix F: Agency Communion Value Scale (ACV)

Agency-Communion Value Measure (ACV)

Below are 24 different values that people rate of different importance in their lives.

FIRST READ THROUGH THE LIST to familiarize yourself with all the values. While reading over the list, consider which ones tend to be most important to you and which tend to be least important to you. After familiarizing yourself with the list, rate the relative importance of each value to you as “A GUIDING PRINCIPLE IN MY LIFE.” It is important to spread your ratings out as best you can—be sure to use some numbers in the lower range, some in the middle range, and some in the higher range. Avoid using too many similar numbers. Work fairly quickly.

1-2 Not Important to me

5 Quite Important to me

8-9 Highly Important To Me

1- - - - -2- - - - -3- - - - -4- - - - -5- - - - -6- - - - -7- - - - -8- - - - -9

_____ (01) WEALTH (financially successful, prosperous)

_____ (02) PLEASURE (having one's fill of life's pleasures and enjoyments)

_____ (03) FORGIVENESS (pardoning others' faults, being merciful)

_____ (04) INFLUENCE (having impact, influencing people and events)

_____ (05) TRUST (being true to one's word, assuming good in others)

_____ (06) COMPETENCE (displaying mastery, being capable, effective)

_____ (07) HUMILITY (appreciating others, being modest about oneself)

_____ (08) ACHIEVEMENT (reaching lofty goals)

_____ (09) ALTRUISM (helping others in need)

Appendix F: Agency Communion Value Scale (ACV)

- _____ (10) AMBITION (high aspirations, seizing opportunities)
- _____ (11) LOYALTY (being faithful to friends, family, and group)
- _____ (12) POLITENESS (courtesy, good manners)
- _____ (13) POWER (control over others, dominance)
- _____ (14) HARMONY (good relations, balance, wholeness)
- _____ (15) EXCITEMENT (seeking adventure, risk, an exciting lifestyle)
- _____ (16) HONESTY (being genuine, sincere)
- _____ (17) COMPASSION (caring for others, displaying kindness)
- _____ (18) STATUS (high rank, wide respect)
- _____ (19) CIVILITY (being considerate and respectful toward others)
- _____ (20) AUTONOMY (independent, free of others' control)
- _____ (21) EQUALITY (human rights and equal opportunity for all)
- _____ (22) RECOGNITION (becoming notable, famous, or admired)
- _____ (23) TRADITION (showing respect for family and cultural values)
- _____ (24) SUPERIORITY (defeating the competition, standing on top)

Appendix G: Goal Attainment Scaling (GAS) worksheets

Goal Attainment Scaling (GAS)

Instructions for participants:

You will now have decided on two goals for you to work towards throughout the course of the 5 week study. It is important to think about how you rate your progress on each of these goals.

You will be asked to provide progress ratings at time points throughout the study.

Progress on each goal will be measured on a 5 point scale with the following parameters:

- 2: Much less progress than desired
- 1: Somewhat less progress than desired
- 0: Expected rate of progress
- +1: Somewhat more progress than desired
- +2: Much more progress than desired

For each goal, consider what the **desired level** of progress would be. So for example if your goal is to 'go to the gym more,' your desired level of progress might be 4-5 sessions in a week. Somewhat less would be 2-3 sessions a week, much less would be 0-1 sessions a week. At the other end of the scale, somewhat more might be 6-7 sessions a week and much more might be 8-9 sessions a week. So the scale for the goal of going to the gym more would be:

- 2: Went to the gym 0-1 sessions in a week
- 1: Went to the gym 2-3 sessions in a week
- 0: Went to the gym 4-5 sessions in a week
- +1: Went to the gym 6-7 sessions in
- +2: Went to the gym 8-9 sessions in a week

Another example for the goal of 'keeping in touch with family' might be:

- 2: 0-10 minutes spent in telephone conversations to home per week
- 1: 11-20 minutes spent in telephone conversations to home per week
- 0: 21-30 minutes spent in telephone conversations to home per week
- +1: 31-40 minutes spent in telephone conversations to home per week
- +2: 41-50 minutes spent in telephone conversations to home per week

On the following page, you will be asked to consider how you will rate progress for each of your goals based on the specified parameters. A good starting point will be to consider what the **desired rate** of progress for each goal will be, then use this as a reference point to define the rest of the rating scale. For each level of rating, try to keep the space between ratings evenly distributed without any overlap.

Appendix G: Goal Attainment Scaling (GAS) worksheets

Goal 1 _____

-2: Much less progress than desired would

be: _____

-1: Somewhat less progress than desired would

be: _____

0: Desired level of progress would

be: _____

+1: Somewhat more progress than desired would be:

+2: Much more progress than desired would

be: _____

Goal 2 _____

-2: Much less progress than desired would

be: _____

-1: Somewhat less progress than desired would

be: _____

0: Desired level of progress would

be: _____

+1: Somewhat more progress than desired would be:

+2: Much more progress than desired would

be: _____

Appendix H: Demographic questionnaire

Participant Demographic Questionnaire

Participant number: _____

Gender: Male [☐]
 Female [☐]
 Other [☐]

Date of Birth: ____ / ____ / ____

Age: _____

Ethnicity:

Appendix I: GAP website example screenshots

Improving mood and well-being by goal setting and planning.

[Timetable](#) [Module 1: Choosing goals](#) [Module 2: Imagining achieving goals](#) [Module 3: Planning to achieve goals](#) [Module 4: Overcoming obstacles](#)
[Module 5: Putting it all into practice](#) [Module 6: Review](#) [Contact](#)



Welcome

Welcome to the Goals and Well-being website. This self-help programme has been developed for people who want to improve their mood and well-being by working towards goals in their every day lives. You will be asked to identify positive goals that you would like to achieve and to make plans for reaching those goals.

- 'Well-being' is about how you feel – feeling good and having a positive view of your life.
- 'Goal' means something you want to achieve and think you can do with a bit of effort. It does not matter how small or 'silly' you think the goal is, or whether it relates to work or the rest of life. Any goal that seems positive and important to you matters.
- 'Self-help' means working on the programme without much support from us. We will keep you reminded of the stage you should be at over the 5 weeks, but other than that, it is for you to commit to the programme and follow it as much as possible. Feel free to involve friends and family in what you are up to – that can be a good source of motivation.

Have a look at the suggested [Time table](#), then use the menu bar to navigate through the site

Appendix I: GAP website example screenshots

Module 2: Imagining achieving goals

Envisaging goals

Before you start developing your plans to achieve your goals, it is important to visualise your goals being achieved. This is to help maintain your motivation and enthusiasm whilst working towards them. Thoughts and images can help maintain persistence when difficulties and distractions arise because they can refocus you to remind you of what is important. One type of imagery, which we will use, is:

- **Result imagery:** This means creating a mental picture of the goal being achieved as if it has already occurred, that is you have done everything you need to do to get there. It is important to imagine the *positive outcome*.

For example someone may want to visualise the goal of wanting to lose weight, so the result imagery could be:

– to visualise the size and weight you want to be;

Download and work through the [Identifying Obstacles Work sheet](#) before continuing.



Obstacles

Obstacles can be of different types:

- Not enough time;
- Not sure whether you can do it;

Appendix I: GAP website example screenshots


- including trying out the skills, the total time commitment should be around **one hour per week over five weeks**

After five weeks, you should aim to have completed the programme and be successfully working towards achieving your goals. Below is a suggested time table for you to follow:

Week 1	Module 1: Choosing goals	DONE!
	Module 2: Imagining achieving goals	30 mins
Week 2	Module 3: Planning to achieve goals	30 mins
	<i>Time to try out plans</i>	
Week 3	Module 4: Overcoming obstacles	30 mins
	<i>Time to try out plans</i>	
Week 4	Module 5: Putting it all into practice	30 mins
	<i>Time to try out plans</i>	
Week 5	Module 6: Review	30 mins
	<i>Time to try out plans</i>	

How it works. You realise that having goals and implementing plans has a number of benefits:

- it creates a feeling of purpose and a sense of being engaged in life;
- it directs what you do on a day-by-day basis;
- it creates a sense that good things will happen in the future;
- it gives you a good feeling at the time (e.g., satisfaction pleasure, relief).



Some of the goals that you will have specified will not be achieved immediately because some of them are longer-term goals, but as you implement action steps you get a greater sense, a psychological 'felt sense', that these things are going to happen rather than being unattainable.

Appendix J: Goal selection worksheets

Goal selection

INTRODUCTION

Before you start to think of your own goals and develop plans for working towards your goals, it is useful to know what is meant by psychological well-being. Having a good understanding of this term will reinforce the reasons why you are setting goals for yourself and why you might like to work towards them.

What is well-being?

Well-being can mean different things to different people. A common definition of psychological well-being is that it is a state of feeling good as a result of having certain psychological factors in place. It is a combination of active positive feelings, such as feeling enthusiastic, energetic, and an absence of negative feelings, such as feeling tense, anxious, worried. These things are combined with a general sense of being satisfied with life to produce a state of well-being. Psychological well-being is therefore an important element of quality of life.

What factors are linked to high psychological well-being?

- Having personal goals and plans to achieve them

Research has shown that a whole range of things is associated with well-being. The area that we will focus on is that people with high levels of well-being have been found to have clear personal goals and have effective plans of action for achieving those goals.

But how do goals and plans relate to well-being?

Having goals and plans contributes to well-being in a number of ways:

- **it creates a feeling of purpose and a sense of being engaged in life;**
- **it directs what you do on a day-by-day basis;**
- **it creates a sense that good things will happen in the future;**
- **it gives you a good feeling at the time (e.g., satisfaction, pleasure, relief).**

Appendix J: Goal Selection worksheets

THE PATH TO AN ENHANCED SENSE OF WELL-BEING

STEP 1: THINKING ABOUT YOUR GOALS

The first step is to think about your goals. Generate a list of goals that are personally important to you by listing your goals below. By goals we mean things that you would like to have happen in the future and that you want to work towards. Goals can be in different areas, for example:

- **Relationships**
- **Work**
- **Money**
- **Health**
- **Leisure**
- **Self-development**

Goals can also be set in different time frames, for example goals can be in:

- **the near future**
- **the distant future**

Think about your own personal goals for a couple of minutes. Please write your goals below:

1.

2.

3.

4.

5.

6.

7.

Appendix J: Goal Selection worksheets

Selecting and refining your goals

The type of goal you set for yourself is important. Goals differ in a number of ways. One aspect is whether your goal is an *approach* or an *avoidance* goal.

Approach goals are the things you want to get in life, for example, “to feel healthier and fitter”. Avoidance goals are the things you don’t want to be the case in your life, for example, “to lose weight”.

Approach goals are much easier to work on than avoidance goals. This is because it is better to focus on what you want in life rather than simply what you want to take out. If some of your goals are avoidance goals you may want to re-phrase the goal so it becomes an approach goal for you to work on (like in the example above). Go back over your list of goals and decide whether they are approach or avoidance goals. Try to re-phrase any avoidance goals into approach goals.

The second aspect that is important for well-being is that your goals should be *self-concordant*.

Self-concordant goals are those that you have, either because you enjoy them (they are therefore associated with pleasure) or because they are part of something that you value. Goals that are not self-concordant are those that you have because you feel you ought to have them or someone else wants you to have them. These goals are not associated with strong feelings of pleasure. Having self-concordant goals enhances well-being and such goals are also easier to make progress on because you are motivated to do things to make them happen. Having non-self-concordant goals has little benefit to well-being, even if they are achieved.

The goals that you work on over the next few weeks will need to be self-concordant. To help you decide whether your goals are self-concordant or not go back over each of the goals that you listed and rate each goal in terms of a self-concordance scale from 1 to 5.

For each goal you will need to ask yourself:

I want to achieve this goal because I value it or I enjoy it (rather than because I feel I ought to achieve it or because it is expected).

Therefore 5 is very self-concordant and 1 is not at all self-concordant.

Write the rating you have applied to each goal beside each goal in your list.

Appendix J: Goal Selection work sheets

Selecting your goals

You should now have a list of goals each with a self-concordance score. From the list of goals you have created you will need to choose two goals that are important to you, that are self-concordant, and that you would like to work towards achieving. Therefore these goals should have scored high on the self-concordance scale. To help you select your goals it will be helpful to consider the following

- **It is important to bear in mind that goals are usually arranged in a hierarchy of importance, and the more important the goal, the more difficult it is to work towards. Therefore if you do have a more difficult, larger goal, you may find it a good idea to select an easier and more approachable goal for now to help you learn the GAP techniques. Once you become more familiar and skilled at these techniques you may then feel more confident on working on your bigger, more important, and difficult goals. However it is ultimately your decision as to what goals you choose to work on but this is something to keep in mind when selecting your goals.**
- **It is important to select two goals that are realistic and lend themselves to action now. This is so that you can start implementing your goal plans over the next few weeks and are able to discuss your progress during the telephone follow-up calls. So for example, the goal, “to go travelling in 3 years”, although perhaps a personally important goal, it will be very hard to work effectively on over the next few weeks. But the goal, “to plan to go travelling this year”, would be a goal that lends itself to action now.**
- **Finally the goals you select should also be goals that you will be comfortable discussing in the telephone follow-ups.**

Select two goals from your list and write them below:

Goal 1:

Goal 2:

Envisaging goals exercise



1. Relaxation

If you are feeling tense take a few minutes to relax. Having a relaxed mind and body helps you to get involved in the imagery exercise. Some people find taking long, slow, deep breaths a good way to help relax their minds and body. Try doing this for a few minutes.

2. Realism and regularity

Take **one of your chosen goals** from module 1. For 3–5 minutes, imagine yourself in the future, picturing in your mind that your goal has been achieved. Try to make it as realistic and vivid as possible. Imagine using all the senses. Try to picture sights, colours, sounds, smells, tastes and physical sensations. Add in as much detail as possible. Keep it positive and appealing!

3. Reinforcement

How does having achieved your goal make you feel? Write down your thoughts and feelings below.

Appendix K: GAP worksheets

<i>Thoughts:</i>	<i>Feelings:</i>

4. Regularity

Repeat stages 1-3 above regularly, preferably once each day. Having practiced on one chosen goal, repeat for your other chosen goal too.

You might like to save or print this worksheet for your records.

110

Appendix K: GAP worksheets



Goal 1 is _____

[illegible]

Does motivational disposition predict the efficacy of a goals-based self-help intervention for improving well-being.

111



Obstacles to goal progress

Even when you have formed plans of action to move towards goals, it is sometimes the case that you don't act on the plans. These are called obstacles and they refer to the reasons for not doing your planned steps.

List below the sorts of things that prevent you from taking the steps that will help you progress towards a goal. Was it easy or hard to anticipate? It may help to think about examples in the past where this has happened or to think about any steps that you did not implement last week.

Appendix K: GAP worksheets

	<i>Description of obstacle</i>	Easy or hard to anticipate?
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

113

Appendix K: GAP worksheets



Goal 1 is _____

[illegible]

Does motivational disposition predict the efficacy of a goals-based self-help intervention for improving well-being.

114



For one of your chosen goals, take a planned step that you have not yet implemented. Think about the pros and cons for the planned step and record them in the table below. Consider the pros and cons of completing the planned step and decide if it is something you want to work towards. Record your decision in the conclusion section at the bottom.

Planned step: _____

Appendix K: GAP worksheets

Pros:
Cons:
Conclusion:

Appendix L: Confirmation of University Ethical Approval

Received 12th October 2017

Dear Gary Lyle,

Application ID: **eCLESPsy000074 v4.1**

Title: **Does motivational disposition predict the efficacy of a self-help intervention for improving well-being?**

Your e-Ethics application has been reviewed by the CLES Psychology Ethics Committee.

The outcome of the decision is: **Favourable**

Potential Outcomes

Favourable:	The application has been granted ethical approval by the Committee. The application will be flagged as Closed in the system. To view it again, please select the tick box: View completed
Favourable, with conditions:	The application has been granted ethical approval by the Committee under the provision of certain conditions. These conditions are detailed below.
Provisional:	You have not been granted ethical approval. The application needs to be amended in light of the Committee's comments and re-submitted for Ethical review.
Unfavourable:	You have not been granted ethical approval. The application has been rejected by the Committee. The application needs to be amended in light of the Committee's comments and resubmitted / or you need to complete a new application.

Please view your application [here](#) and respond to comments as required. You can download your outcome letter by clicking on the 'PDF' button on your eEthics Dashboard.

If you have any queries please contact the CLES Psychology Ethics Chair:

Lisa Leaver L.A.Leaver@exeter.ac.uk

Kind regards,
CLES Psychology Ethics Committee

Appendix M: Submission guidance for Behaviour Research and Therapy

GUIDE FOR AUTHORS

.

INTRODUCTION

The major focus of *Behaviour Research and Therapy* is an experimental psychopathology approach to understanding emotional and behavioral disorders and their prevention and treatment, using cognitive, behavioral, and psychophysiological (including neural) methods and models. This includes laboratory-based experimental studies with healthy, at risk and subclinical individuals that inform clinical application as well as studies with clinically severe samples. The following types of submissions are encouraged: theoretical reviews of mechanisms that contribute to psychopathology and that offer new treatment targets; tests of novel, mechanistically focused psychological interventions, especially ones that include theory-driven or experimentally-derived predictors, moderators and mediators; and innovations in dissemination and implementation of evidence-based practices into clinical practice in psychology and associated fields, especially those that target underlying mechanisms or focus on novel approaches to treatment delivery. In addition to traditional psychological disorders, the scope of the journal includes behavioural medicine (e.g., chronic pain). The journal will not consider manuscripts dealing primarily with measurement, psychometric analyses, and personality assessment.

The Editor and Associate Editors will make an initial determination of whether or not submissions fall within the scope of the journal and/or are of sufficient merit and importance to warrant full review.

Early Career Investigator Award

This award is open to papers where the first author on the accepted papers is within 7 years of their PhD. By endorsing candidature for the annual Early Career Investigator Award, your manuscript will be reviewed by the Associate Editors/Editor-in-Chief for an annual award for the most highly rated paper. The winner will be announced in print, and will have the option of being spotlighted (photo and short bio).

The CONSORT guidelines (<http://www.consort-statement.org/>?) need to be followed for protocol papers for trials; authors should present a flow diagramme and attach with their cover letter the CONSORT checklist. For meta-analysis, the PRISMA (<http://www.prisma-statement.org/>?) guidelines should be followed; authors should present a flow diagramme and attach with their cover letter the PRISMA checklist. For systematic reviews it is recommended that the PRISMA guidelines are followed, although it is not compulsory.

Contact details

Any questions regarding your submission should be addressed to the Editor in Chief: Professor Michelle G. Craske
Department of Psychology
310 825-8403

Email: brat@psych.ucla.edu

Submission checklist

You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

Ensure that the following items are present:

One author has been designated as the corresponding author with contact details: • E-mail address
• Full postal address

All necessary files have been uploaded:

Manuscript:

- Include keywords
 - All figures (include relevant captions)
 - All tables (including titles, description, footnotes)
 - Ensure all figure and table citations in the text match the files provided
- Indicate clearly if color should be used for any figures in print *Graphical Abstracts / Highlights files* (where applicable) *Supplemental files* (where applicable)

Further considerations

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Appendix N: Dissemination Statement

The results of this study will be disseminated to interested parties through feedback, journal publication and presentation.

Dissemination to participants.

Results of this study will not be fed back to participants individually. However, participants have been informed that they may contact myself using the contact details on the debriefing form should they wish to receive information about the results.

Journal Publication

It is expected that the study will be submitted for publication to Behaviour Research and Therapy.

Presentation

On 11th June 2018, my research findings will be presented to an academic audience, for peer review, as part of the Doctorate in Clinical Psychology at the University of Exeter.